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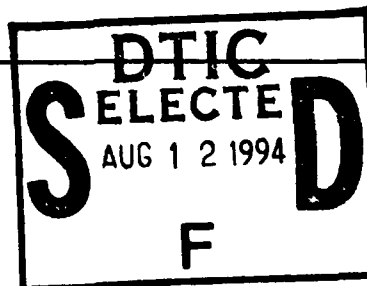
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VARIABLES AND COPING WITH STRESSFUL SITUATIONS  
IN A MILITARY POPULATION

BY PETER F. DURAND

A dissertation submitted to the  
Graduate School-New Brunswick  
Rutgers, The State University of New Jersey  
in partial fulfillment of requirements  
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Graduate Program in Social Work

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## ABSTRACT OF THE DISSERTATION

# The Relationship Between Alcoholism, Context of Retirement Variables and Coping with Stressful Situations in a Military Population

by PETER F. DURAND

Dissertation Director: Professor Eileen M. Corrigan

Recent years have reflected a growing interest in the range of factors which influence individual responses to stress. This study focused on the association between alcoholism, context of retirement variables (eg., control over the retirement decision, length of planning before retirement, timing of retirement) and the mechanisms used in responding to stressful situations. Based on self-reports of behavioral and cognitive responses to a recent threat situation, it was hypothesized that level of alcohol use would be significantly associated with both variations in personal/interpersonal resources available for coping with stress and the mechanisms used in response to stress. Context of retirement variables were examined to determine their relationship to coping resources and responses.

Data analyzed for this study was collected from 192 male alcoholics admitted for treatment, 1 February - 30 June 1989, at seven inpatient Alcoholism Rehabilitation Centers operated by the Air Force. The remainder of the sample was

randomly selected and included 286 non-alcoholic males serving on active duty and retired from the Air Force. A hierarchical multiple regression model was used to examine the relationship between key study variables (eg., alcoholism, context of retirement variables) and coping mechanisms used in confronting stress, and to identify significant interactions with personal/interpersonal resources. Alcoholics perceived less control over life events and were found to have a lower sense of self-esteem, less satisfactory intimate relations, less autonomy and more family problems. Alcoholism was also significantly related to increased use of the emotion-focused coping mechanisms of wishful thinking and growth-oriented coping. No differences were found in the use of active coping mechanisms. A longer period of planning before retirement, retiring earlier than peers and retiring voluntarily were associated with active and growth-oriented coping and with a greater tendency to seek social support. Both alcoholism and context of retirement variables were found to accentuate the relationship between coping resources and responses, either attenuating the effects of increased resources or aggravating the effects of resource limitations.

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## TABLE OF CONTENTS

	Page
ABSTRACT OF DISSERTATION	ii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES	viii
CHAPTER I	
INTRODUCTION	1
Hypotheses for the Study	4
Rationale for the Study	5
Specific Aims	10
CHAPTER II	
LITERATURE REVIEW	13
Conceptual Context and Problem Components	13
Stress	13
Retirement	16
Appraisal and Coping	18
Coping Resources	20
Research Literature	25
Stress and Alcohol	25
Retirement	27
Coping	30
Resources	34
Health	34
Perceptions of Control	36
Self-Esteem	38
Social Supports	38
CHAPTER III	
METHOD OF STUDY	44
Subject Selection	44
Alcoholics	45
Non-Alcoholics	46
Data Collection	47
Measures	49
Health	49
Self-Esteem	50
Control	51
Social Support	52
Extent of Alcohol Use	55
Context of the Retirement Decision	57
Current Living Conditions	57
Coping Responses	57
Data Analysis	61

**TABLE OF CONTENTS**  
(Continued)

	<b>Page</b>
<b>CHAPTER IV</b>	<b>RESULTS</b> 66
	Characteristics of the Sample 66
	Comparison of Active Duty Sub-Sample with total Air Force 66
	Comparison of Study Subjects with All Air Force Retirees 67
	Comparison of Sub-Sample Characteristics 71
	Retirement Characteristics of Alcoholics and Non-Alcoholics 88
	Characteristics of the Stressful Event 93
	Relationships among Variables 98
	Relationships among Socio- Demographic Variables 99
	Relationships among Context of Retirement Variables 105
	Relationships among Variables Characterizing the Stressful Event 111
	Impact of Military Status and Level of Alcohol Use on Resource and Coping Variables 114
	Fitting the Regression Model 121
	Testing for Interactions 133
<b>CHAPTER V</b>	<b>SUMMARY AND CONCLUSIONS</b> 153
	Summary 153
	Discussion 159
	Limitations 168
	Recommendations for Future Study 171
<b>APPENDICES</b>	
<b>I</b>	Information Letter and Voluntary Consent Form 173
<b>II</b>	Survey Cover Letter (Subjects Completing Inpatient Treatment) 176
<b>III</b>	Survey Cover Letter (Non- Treatment Subjects) 178

**TABLE OF CONTENTS**  
(Continued)

	<b>Page</b>
IV Postcard Reminder	180
V Second Mailing Survey Cover Letter (Subjects Completing Inpatient Treatment)	182
VI Second Mailing Survey Cover Letter (Non-Treatment Subjects)	184
VII Survey Return Postcard	186
VIII Survey Form	188
IX Variables Included in the Regression Statements	208
X Zero-Order Correlations and descriptive information for Interval Level Study Variables	211
XI Model	215
BIBLIOGRAPHY	217
VITA	234

## LIST OF TABLES

Table		Page
4.1	Comparison of Study Participants Serving on Active Duty with All Those Serving in the Air Force in 1989	68
4.2	Comparison of Retired Study Participants with all Those Listed as Retired from the Air Force in 1989	70
4.3	Average Age of Study Participants	72
4.4	Average Years of Active Duty Service for Study Participants	74
4.5	Highest Grade Completed in School by Study Participants	75
4.6	Marital Status of Study Participants	76
4.7	Racial Composition of Study Participants	78
4.8	Religious Composition of Study Participants	79
4.9	Income Characteristics of Study Participants	80
4.10	Number of People Dependent on the Family Income of Study Participants	83
4.11	Length of Time at Present Residence for Study Participants	84
4.12	Number of Job Changes for Study Participants in the Past Five Years	86
4.13	Number of Residence Changes During the Past Five Years for Study Participants	87
4.14	Retirement Characteristics of Study Participants - Retirement Decision, Timing of Retirement	90
4.15	Retirement Characteristics of Study Participants - Retirement Classes Attended, Planning Before Retirement, Employment Status	91

**LIST OF TABLES**  
(Continued)

<b>Table</b>	<b>Page</b>
4.16 Characteristics of Stressful Events Identified by Study Participants	95
4.17 Relationship Between Race and Income Among Study Participants	100
4.18 Relationship Between Race and Rank Among Study Participants	101
4.19 Relationship Between Income and Marital Status Among Study Participants	103
4.20 Relationship Between Rank and Marital Status Among Study Participants	104
4.21 The Relationship Between the Reasons for Retirement and the Timing of Retirement	106
4.22 Relationship Between the Timing of Retirement Decision and the Length of Planning Before Retirement	107
4.23 Timing of Retirement in Relation to Current Employment Status	109
4.24 Relationship Between Timing of Retirement in Relation to Peers and Timing of Retirement in Relation to Planning	110
4.25 Relationship Between the Severity of the Event and the Length of Time Since the Event Occurred	112
4.26 Relationship Between the Severity of the Event and the Context Within Which the Event Occurred	113
4.27 Means and Standard Deviations for Resource Variables by Military Status and Level of Alcohol Use	115
4.28 Means and Standard Deviations for Ways of Coping Factors by Military Status and Level of Alcohol Use	119

**LIST OF TABLES**  
(Continued)

<b>Table</b>	<b>Page</b>
4.29      Stepwise Regression of "Wishful Thinking" Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables for Study Participants	124
4.30      Stepwise Regression of Growth-Oriented Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables for Study Participants	126
4.31      Stepwise Regression of Active Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables for Study Participants	128
4.32      Stepwise Regression of "Seeks Social Support" on Socio-Demographic, Resource and Context of Stressful Situation Variables for Study Participants	129
4.33      Stepwise Regression of Cognitive Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables for Study Participants	131
4.34      Hierarchical Multiple Regression of Wishful Thinking Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables, Including First-Order Interactions of Alcoholism and Retirement Variables with Resource Variables	136
4.35      Hierarchical Multiple Regression of Growth-Oriented Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables, Including First-Order Interactions of Alcoholism and Retirement Variables with Resource Variables	141
4.36      Hierarchical Multiple Regression of Active Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables, Including First-Order Interactions of Alcoholism and Retirement Variables with Resource Variables	143

**LIST OF TABLES**  
(Continued)

<b>Table</b>	<b>Page</b>
4.37      Hierarchical Multiple Regression of Seeks Social Support Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables, Including First-Order Interactions of Alcoholism and Retirement Variables with Resource Variables	145
4.38      Hierarchical Multiple Regression of Cognitive Coping on Socio-Demographic, resource and Context of Stressful Situation Variables, including First-Order Interactions of Alcoholism and Retirement Variables with Resource Variables	148

## CHAPTER 1

### INTRODUCTION

Recent years have reflected a growing interest in the consequences of stress for individual functioning. While past efforts have focused on the stressful event itself, recent work has pointed to a broad range of variables which may serve to mediate the impact of stress (Lazarus and Folkman, 1984; Folkman and Lazarus, 1980; Pearlin and Schooler, 1978; House, 1974). As a result, attention has shifted to the process by which people cope with stress. However, much of the work in this area has drawn on community populations comprised of young and middle-aged adults who remain within the work force (eg., Folkman and Lazarus, 1980; Pearlin and Schooler, 1978). Only recently has interest in the coping process extended to such special populations as alcoholics (Finney and Moos, 1984; Cassidy, 1984) or the retired (Elwell and Maltbie-Crannell, 1981) and comparatively little is known about the process of coping within these groups. The broad purpose of this study is to examine differences between male alcoholics and non-alcoholics in the manner in which they cope with stressful situations. A second purpose of this study is to identify circumstances under which differences in coping responses

occur between those who remain on active duty with the Air Force and those who have retired. Of particular interest in this regard are the context within which retirement occurred and current living circumstances.

Briefly, the coping process involves all ". . . efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person." (Lazarus and Folkman, 1984, p. 141) Although current research is limited (Menaghan, 1983, p. 120) and results have been mixed (Billings and Moos, 1984), coping skills have increasingly been suggested as a buffer against the effects of stress (Osipow et al, 1985; George, 1980, p. 52-53; Folkman and Lazarus, 1980; Antonovsky, 1979, p. 103; Pearlin and Schooler, 1978).

Appraisal is seen as the mechanism through which the individual assigns meaning to the events and experiences encountered in life (Folkman and Lazarus, 1980, p. 223). Stress, then, is an individually defined experience (House, 1974, p. 14) and the appraisal process is important in determining the appropriate response to that stress (Finney and Moos, 1984, p. 284). Coping resources are the broad set of psychological, social and physical attributes (eg., health, esteem, beliefs about one's ability to effect the environment, income, social support, etc.) available to the individual in developing a response (Billings and Moos, 1982, p. 215). As such, they define the context within which response decisions are made (Pearlin and Schooler, 1978, p. 5). Drawing on

situational and personal sources, coping responses may be either problem-focused, designed to directly alter or manage the situation causing stress, or emotion-focused, in which the effort is geared toward altering or managing the emotions generated by the situation (Lazarus and Folkman, 1984, p. 150).

Variability in response to a stressor is determined in part by the degree of vulnerability of the individual (House and Robbins, 1983, p. 176; Magnussen, 1982, p. 234-235; Pearlin et al, 1981, p. 339; Hinkle, 1974, p. 40-41) reflecting the particular mix of coping resources and responses available. While it has been suggested that alcoholics as a group experience limitations in coping abilities (Williams et al, 1982, p. 498-499; Intagliata, 1978, p. 496), empirical data to support this is limited. Studies which have looked at resources and their relationship to coping among alcoholics are even more rare. Finally, while most people adjust well to retirement (Foner and Schwab, 1983, p. 72-74; Kasl, 1980, p. 173), contextual issues such as the extent of planning for or timing and control of the retirement decision have been cited as important factors determining subsequent adjustment (Howard et al, 1982, p. 497-499; Minkler, 1981, p. 119; Price et al, 1979) and retirement may have a significant impact on the personal and social resources available to the individual (George et al, 1984; Elwell and Maltbie-Crannell, 1981). In assessing the relationship between alcoholism and coping within this study, it is

important to assess differences in the context in which the retirement decision was made and the extent to which those differences are associated with on-going variations in coping resources.

### Hypotheses for the Study

Based on the above, the primary elements of this study are stress, appraisal, coping resources, drinking history and the context of retirement. The dependent measure is coping responses. The following specific hypotheses are offered:

(1) Alcoholics will use a more restricted range of coping mechanisms than will non-alcoholics;

(2) Alcoholics will use fewer problem-focused coping mechanisms than will non-alcoholics;

(3) Those alcoholics and non-alcoholics for whom the retirement context has been more negative (eg., limited planning, perceived limitation in control over the timing of retirement, involuntary retirement, etc.) will display a more restricted range of coping responses;

(4) The resources available to alcoholics for coping with stressful situations will be more limited than for non-alcoholics and this will be associated with a more restricted range of coping responses; and

(5) The resources available to those for whom the retirement context has been more negative will be more limited and this will be associated with a more restricted range of coping responses.

### Rationale for the Study

Interest in coping behaviors is clearly consistent with a rich tradition within the field of social work. In offering a paradigm for stress research, House notes that the understanding of any event in the life of an individual can only occur through the awareness of person and situation factors (House, 1974, p. 14). Similarly, Pervin indicates that regularities in behavior can only be identified by examining the interplay of person and situation characteristics (Pervin, 1987; Pervin and Lewis, 1978). It is this intersection of individual and environmental factors which has been repeatedly defined as the focus of social work practice (Minahan, 1980, p. 435; Gordon, 1965, p. 38). Given the over-riding goal of enhancing individual skills and resources in managing encounters with the environment, understanding those factors which facilitate or hinder this exchange takes on considerable importance. The development of a more complex model of the stress-response relationship allows for examination of process as well as outcome and the identification of factors which mediate the impact of stress (Finney et al, 1984). It is the nature of these intervening variables, both personal and contextual, which forms the focus for this study. Only recently have researchers begun to explore these issues in relation to retirement (Crowley, 1985; Elwell and Maltbie-Crannell, 1981; George, 1980) or alcoholism (Finney and Moos, 1984; Cronkite and Moos, 1980), and there is a dearth of information concerning the relationship between

the two.

In this context, coping skills training has been suggested as an important element in the total treatment experience of those with alcohol use problems (Moos et al, 1990; Monti et al, 1989; Powers and Kutash, 1985, p. 479; Wells-Parker et al, 1983). In part this appears to be predicated on research in the general population which suggests that coping may be an important factor mediating the impact of stress (Finney and Moos, 1984, p. 205). It also draws on studies which suggest that alcoholics may in fact be more restricted in their coping skills than non-alcoholics (Williams et al, 1982; Intagliata, 1978). Particular interest, however, has been reflected in the area of relapse prevention. Cronkite and Moos reported in their longitudinal study of alcoholics following treatment that life factors and coping responses were strongly associated with outcome (Cronkite and Moos, 1980). Their subsequent research has reaffirmed this finding (Moos et al, 1990, p. 225). Similar findings suggesting that limitations in coping skills may be associated with negative treatment outcomes have been reported by a number of others (Saunders and Allsop, 1987; Litman et al, 1983; Rosenberg, 1983; Sanchez-Craig and Walker, 1982; Litman et al, 1979). However, limited data concerning factors which influence coping in subgroups of alcoholics points to the need for continued research.

As has been suggested in relation to other mediators of the stress outcome process (Thoits, 1982(a); Cassel, 1976),

it would seem more realistic to focus efforts on development of the individual's coping repertoire than to attempt to eliminate stress altogether. However, results of coping skills training programs reported in the literature have been mixed (Monti et al, 1989, p. 171; Sanchez-Craig and Walker, 1982; Intagliata, 1978). While this has been attributed, at least in part, to cognitive deficits associated with prolonged, heavy use of alcohol (Wilkinson and Sanchez-Craig, 1981; Guthrie and Elliott, 1980), other factors may be involved. Pearlin et al (Pearlin et al, 1981) have pointed to the need for expanded understanding of the linkages between coping resources and this has been echoed by others (Billings and Moos, 1984 p. 888; Menaghan, 1983; p. 132; Kobasa and Pucetti, 1983, p. 849). Movement beyond the mechanics of skill acquisition to a better understanding of the process involved, the nature and interrelationship of factors which restrict or expand coping abilities, is essential not only to the development of coping skills programs, but also to the integration of such programs into the overall rehabilitation process (Ell, 1986, p. 341).

Expanded understanding of this interplay of coping resources and responses is directly relevant to at least two practice areas. Individualized service has long been a basic tenet of social work practice (Kosberg and Harris, 1978, p. 70; Simon, 1970, p. 375), insuring that the services provided are in fact geared to the unique needs of the individual. In developing and providing services, however, it is important

to understand, ". . . for who, when and under what conditions, and in what ways, patients' sense of control, social support experience, and coping should be targeted for intervention." (Ell, 1986, p. 341) As important as the initial assessment of services is the development of follow-on treatment resources to reinforce the initial rehabilitative experience (Sanchez-Craig and Walker, 1982, p. 48; Intagliata, 1978, p. 497).

Expanded understanding of the impact on coping of variations in individual attributes or resources may well be helpful in identifying those who are most vulnerable to stress. It has long been held that alcoholism is a multidimensional process which effects people differently and, as a consequence, treatment responses should vary depending on the identified needs of the individual (Wallace, 1989; Pattison, 1980; Kern et al, 1978; Hyman, 1976; Lowe and Thomas, 1976). Despite the heterogeneous nature of the population, precious little is known about those factors which distinguish groups of alcoholics and even less is known about the needs and treatment capabilities of alcoholics across the life course. While age differences in coping mechanisms have not been found, it has been suggested that individuals at different life stages are likely to experience different stressors (El-Shiekh et al, 1989; McRae, 1989). One event which can significantly effect the life experience of the individual is retirement. While most retirements are voluntary (Parnes and Less, 1985, p. 2) and the majority of

people encounter minimal problems in making the transition (Keith et al, 1984, p. 81; Foner and Schwab, 1983, p. 74), a number of factors have been identified as important in defining the degree of perceived stress. In addition to the resources of health and income (George et al, 1984, p. 368; Howard et al, 1982, p. 489-490), such factors as the degree of personal control over the decision to retire (Kimmel et al, 1978), the timing of the event (Minkler, 1981, p. 120) and the extent of planning in anticipation of retirement (Price et al, 1979, p. 242) are frequently cited. Within a military population, retirement takes on special importance (Kilpatrick and Kilpatrick, 1979; McNeil and Giffen, 1967, 1965a, 1965b). Its occurrence at the height of the individual's productive capacity, the demands for significant changes in life style and social relationships, and the difficulty in transferring job skills may well serve to limit the psychological, social and environmental resources necessary for effectively managing other stressors. When this occurs in the context of an existing alcohol use problem, it may be particularly devastating. If differences are identified in coping resources and responses among alcoholics and non-alcoholics serving on active duty or retired from the military, it would have significant implications both for the training of treatment personnel and the development of programs to enhance treatment outcome.

### Specific Aims

As noted previously, increasing emphasis has been placed on alcoholism as a multidimensional, rather than a unidimensional, process (Wallace, 1989; Monti et al, 1989; Pattison, 1980). Similarly, there has been a growing awareness that alcoholics comprise a heterogeneous, rather than a homogeneous, group (Pokorny and Kanas, 1980; Schuckit and Pastor, 1978; Kern et al, 1978). With some notable exceptions (eg., Moos et al, 1990), relatively little research has been devoted to an examination of coping mechanisms among alcoholics and even less to the exploration of differences in coping resources and responses among subgroups of alcoholics. While anecdotal information exists suggesting that retirement from the military is an event experienced as stressful by many (Kilpatrick and Kilpatrick, 1979; Berkey and Stoebner, 1968), little substantive research has been conducted to determine whether differences in psychological, social and objective resources exist between those serving on active duty and those retired from the Air Force, nor is there any information assessing the impact of alcoholism on coping resources and responses for each of these groups.

Increasingly, research over the past decade has stressed variability in response to stress in the general population (Pearlin et al, 1981; Folkman and Lazarus, 1980) and among both alcoholics (Finney and Moos, 1984) and the elderly (George, 1980). The pivotal role of coping resources in shaping responses to stressful situations has been defined

both theoretically (Matheny et al, 1986, p. 506; Lazarus and Folkman, 1984; House, 1974) and empirically (eg., Moos et al, 1990; Folkman and Lazarus, 1980; Pearlin and Schooler, 1978). To the extent that resources for coping are limited, the individual may be seen as vulnerable and the range of coping responses is likely to be restricted (Monti et al, 1989, p. 169; Giordano and Beckham, 1985, p. 76; Finney and Moos, 1984, p. 281; Magnussen, 1982, p. 235; Rabkin, 1982, p. 567). While it has been suggested that coping responses are likely to be restricted among alcoholics (Cooper et al, 1988; Cassidy, 1984; Williams et al, 1982; Intagliata, 1978) and that coping resources may well be limited among the retired (Elwell and Maltbie-Crannell, 1981), no information is available concerning the interaction of these factors. An understanding of the impact of alcoholism and retirement on coping resources and the resulting implications for coping responses would appear to be an important element in defining the composition of on-going treatment programs for recovering alcoholics.

In line with this, the specific aims of this study are:

- (1) To determine if there are discernable differences in the manner in which alcoholics and non-alcoholics respond to stressful situations;
- (2) To determine if there are discernable differences in responses to stressful situations given differences in the context of retirement (eg., timing, control, planning, etc.);
- (3) To determine if differences in coping responses between alcoholic and non-alcoholics are related to

differences in psychological, social and objective resources;

(4) To determine whether variations in the context of retirement (eg., timing, control, planning, etc.) are related to differing levels of resources available for coping with stress;

(5) To determine if variations in coping resources are related to variations in responses to stressful situations; and

(6) To examine interactions between the key study variables (alcoholism and context of retirement factors) and coping resources and to assess their impact on coping responses.

## CHAPTER II

### LITERATURE REVIEW

As noted, the major components of this study are stress and alcoholism, retirement, appraisal and coping, and coping resources. These are to be viewed within the context of a cognitive-phenomenological model which draws on the work of a number of researchers in the area of stress and coping (Lazarus and Folkman, 1984; Moos and Billings, 1982; Folkman and Lazarus, 1980; Pearlin and Schooler, 1978; House, 1974; Lazarus, 1966) and has been applied as a framework for examining both alcoholism (Moos et al, 1990; Finney and Moos, 1984) and retirement (George, 1980).

#### Conceptual Context and Problem Components

##### Stress

Within the cognitive-phenomenological context, stress occurs whenever it is perceived that internal or external demands exceed individual capabilities or occur under circumstances where there are impediments to the realization of personal needs (Holroyd and Lazarus, 1982, p. 22; House, 1974, p. 13). Traditional research in the area of stress has focused on the direct relationship between life events and subsequent physical and/or psychological dysfunction (Holmes

and Masuda, 1974; Holmes and Rahe, 1967). However, this perspective has been criticized on a number of points: methodological concerns, including the overlap between event and outcome measures and the difficulty in distinguishing between illness and illness behavior (Kasl, 1980, p. 153); theoretical concerns centering on the underlying assumption that the organism is intolerant of change (Pearlin et al, 1981, p. 339); lack of recognition for the normative nature of many events and the importance of timing in determining impact (Kasl, 1980, p. 153); emphasis on the number and magnitude of events, but not their quality (George, 1980, p. 10-11); absence of consideration of alternative stressors which may be equally predictive of outcome (Monat and Lazarus, 1991, p. 159; Moos and Billings, 1982, p. 214; Chiriboga and Cutler, 1980, p. 358); and limited consideration of personal factors influencing outcome (Moos et al, 1990, p. 237-238; Finney and Moos, 1984, p. 268). The cognitive-phenomenological model has shifted focus to the intersection between individual and environment, stressing the meaning of the event as a critical factor determining response (Fry, 1990, p. 188-189; Coyne and Lazarus, 1980, p. 145; George, 1980, p. 11). In this sense, the model might be termed one of "interdependent interaction" (Pervin and Lewis, 1978, p. 14-15), in which one part of the system can only be understood in relation to other parts of the system. Similarly, change in one part of the system is likely to have a reverberating impact on other parts of that system (Moos and Billings, 1982, p. 214). It is this

concept which forms the basis for this study.

Work addressing the relationship between stress and alcohol among older individuals has tended to focus on the extent to which stress may be seen as a causal factor prompting or sustaining alcohol abuse (Dupree et al, 1984; Brody, 1982; Peck, 1979; Blose, 1978). However, this relationship would appear far from established (Atkinson et al, 1985; Giordano and Beckham, 1985). Critics have noted difficulties in defining a causal relationship (Finney and Moos, 1984; Douglas, 1984). In addition, it has been noted that losses and transitions occur at all ages and are eventually encountered by all who survive into old age, yet few become alcoholic (Atkinson and Kofoed, 1982). Finally, although recent research suggests that trends in alcohol use among older groups may be changing (Glynn et al, 1984), most studies reflect a decline in use with age (Myers et al, 1982; Barnes, 1979).

More relevant to this study are tentative findings which indicate that stressful life events are more common among alcoholics (Williams et al, 1982, p. 495; Bell et al, 1976, p. 469-470) and the frequent assumption that stress increases both qualitatively and quantitatively with age (eg., Finney and Moos, 1984, p. 267; Peck, 1979, p. 65; Blose, 1978, p. 18). Small samples, lack of controls and the retrospective nature of available studies underscore the need for additional clarification. However, existing research suggests that stress may well decrease with age (House and Robinns, 1983;

Chiriboga and Cutler, 1980; Holmes and Masuda, 1974) and that, within a treatment population, older alcoholics may reflect a lower level of anxiety (Abelsohn and van der Spuy, 1978; Linn, 1978). Variability in response to stress within the general population (Pearlin et al, 1981; Folkman and Lazarus, 1980), and among both alcoholics (Finney and Moos, 1984) and the elderly (George, 1980) would emphasize the need for a shift in focus from the nature of the stress to those intervening factors which are likely to influence the response to stress.

### Retirement

That retirement constitutes a major life transition and may be stressful for some people is generally accepted (Crowley, 1985; Howard et al, 1982; George, 1980; Kasl, 1980). While most theories of retirement stress the adjustive demands engendered by this transition (George, 1980; Hendricks and Hendricks, 1979; Shanas, 1972; Reichard et al, 1968), it has also been noted that labor force participation rates continue to drop among the elderly (Parnes and Less, 1985) and that only a small portion of those who retire do so as a result of mandatory requirements (Foner and Schwab, 1983). In addition, most measures of retirement adjustment do not reflect significant difficulties for the vast majority of individuals within the general population (Crowley, 1985; Beck, 1982; Howard et al, 1982; Crawford, 1972; Atchley, 1971). Finally,

it has been pointed out that retirement has been increasingly viewed as a normative transition which may have positive consequences for the individual (Giordano and Beckham, 1985; Parnes and Less, 1985).

As a result of the above, recent efforts have begun to focus on the multiplicity of factors which converge to define the impact of retirement (Foner and Schwab, 1983, p. 80; House and Robbin, 1983, p. 177; Howard et al, 1982, p. 492; Kasl, 1980, 151). In this regard, contextual influences, such as timing (Price et al, 1979; Hultsch and Plemons, 1979; Bourque and Back, 1977), the amount of change demanded by the event (Howard et al, 1982, p. 492) and the degree of personal control the person perceives over the decision (Kimmel et al, 1978) have all been cited as influencing the impact of retirement. Equally important for this study are efforts to determine the impact of retirement on personal resources. The most consistently cited resource influenced by retirement is income (George et al, 1984). Health has also been mentioned, but the exact relationship between retirement and health is uncertain (Minkler, 1981), and research suggests that declines in health may be a factor precipitating retirement rather than resulting from it (Crowley, 1985; Palmore et al, 1984). It has also been suggested that role loss due to retirement may result in reduced involvement in community activities and a decreased sense of well-being (Mutran and Reitzes, 1981), increased perceptions of social worth, as well as perceptions of uselessness, and decreased levels of life satisfaction

(George et al, 1984). However, few studies have examined the relationship between retirement and coping resources (see Elwell and Maltbie-Crannell, 1981) or the circumstances under which retirement may serve to restrict coping responses.

### Appraisal and Coping

As noted previously the traditional life-event model of stress research has been criticized for the tendency to downplay the quality of the stressful event as a factor related to outcome and to assume that the impact of a given event will be consistent across individuals (Finney and Moos, 1984; George, 1980). Implicit in these criticisms is the belief that stress is an individually defined experience. This factor has been offered as one element contributing to the variable adjustment of individuals to retirement (Wan, 1982, p. 6; Minkler, 1981, p. 119) and is a basic element in a cognitive-phenomenological theory of stress (House, 1974, p. 14). The mechanism through which an individual attributes meaning to an event is termed appraisal (Matheny et al, 1986, p. 506; Billings and Moos, 1982, p. 225; Holroyd and Lazarus, 1982, p. 22-23; Folkman and Lazarus, 1980, p. 223) and involves an assessment of the relationship between external and internal demands and personal needs, as well as the attributes and capabilities available for responding to the event. While appraisal is seen as being heavily dependent on the range of personal resources which can be brought to bear (Kobasa and Puccetti,

1983, p. 840; Pearlin et al, 1981, p. 346), characteristics of the situation such as desirability of the event, the degree to which it was anticipated or seen to be controllable, and its magnitude all influence the nature of the appraisal (Moos and Billings, 1982, p. 225). Thus, while the meanings assigned to the event may be grounded on a common social, psychological or physical referent, there is likely to be considerable diversity in response.

Through the appraisal process, events may be defined as threats, challenges, or losses (Holroyd and Lazarus, 1982, p. 23). The distinction among these is both temporal and judgemental, with harm (or loss) referring to a current condition, while threat or challenge focuses on an assessment of future consequences. The importance of this appraisal process is reflected in research which indicates that actual coping responses differ depending on the meaning assigned to the event (Miller et al, 1988; McCrae, 1984). It has been noted that emotion-focused coping, designed to alter the meaning of the event rather than to directly effect the event itself, is more likely to be used and to be seen as effective in situations which are appraised as offering limited opportunity for the exercise of personal control (Pearlin and Schooler, 1978, p. 13). In line with this, it has been suggested that one aspect of the generally positive response to retirement, despite the changes associated with this transition, may center on a lowering of expectations and a redefinition of rewards as people age (Foner and Schwab, 1983,

p. 80-81). In situations which afford greater flexibility in response, problem-focused coping aimed at changing or influencing the event is more likely to be used (Folkman and Lazarus, 1980, p. 231-232) and those who are most effective in dealing with stress will exercise a broad range of both emotion and problem focused coping responses (Folkman and Lazarus, 1980, p. 227; Pearlin and Schooler, 1978, p. 14-15). The importance of flexibility in response to stress is reflected in studies such as those reported by Wright and Sweeney (1989) or Solomon et al (1990), both of which report a strong association between increased somatic symptoms and increased use of emotion-focused coping mechanisms. Again, within the context of adjustment to retirement, the strain toward continuity has been suggested as one problem-focused mechanism for reducing stress (Foner and Schwab, 1983, p. 81). In essence, the individual copes with retirement by striving to maintain previous activity patterns to the extent possible.

### Coping Resources

Given the above, the cognitive-phenomenological model of stress and coping would suggest that the outcome of any given stressor will be at least partly determined by the nature of the coping resources available to the individual (Osipow et al, 1985, p. 105). As noted previously, coping resources refer to all those attributes, skills, or beliefs available to the individual in developing his coping repertoire (Pearlin

and Schooler, 1978, p. 5). While some (Menaghan, 1983) stress psychological and interpersonal factors, others (Antonovsky, 1979) include the range of instrumental resources such as money. It is this broader definition which is being applied in this study. To the extent that resources for coping are limited, the individual may be seen as vulnerable and the range of coping responses is likely to be restricted (Smith et al, 1990, p. 360; Giordano and Beckham, 1985, p. 76; Finney and Moos, 1984, p. 281; Magnusson, 1982, p. 235; Rabkin, 1982, p. 567). Vulnerability then is defined largely in personal terms and evolves out of the appraisal of strengths and weaknesses reflected across the range of resources available for responding in a given situation (House and Robbins, 1983, p. 176-177).

While it has been tentatively suggested that coping responses are likely to be restricted in the presence of alcoholism (Cassidy, 1984; Williams et al, 1982; Intagliata, 1978), very little work has been done in determining the impact of alcoholism on coping resources or, within a retired population, the relative impact on resources of factors related to the context or experience of retirement. As noted previously, the range of resources available will also be a factor influencing the appraisal of stress and the determination that a given event represents a threat, a loss, or a challenge (Holroyd and Lazarus, 1982, p. 22-23; Folkman and Lazarus, 1980, p. 223). While situational demands may vary, coping resources represent fairly stable personal

characteristics (Moos and Billings, 1982, p. 215) and, as such, may help to explain findings which suggest consistency as well as variability in coping responses across situations (McCrae and Costa, 1986, p. 400; Moos and Billings, 1982, p. 226; Folkman and Lazarus, 1980, p. 229).

The resources which have been included in this study are health, generalized beliefs concerning control, self-esteem, and social supports. Briefly, although a causal relationship has not been established, most studies of retirement reflect a correlation with increased health problems (Palmore et al, 1984, p. 109; Howard et al, 1982, p. 495). Studies of older alcoholics suggest an increased potential for health-related problems (Hartford and Thienhaus, 1984, p. 253-254; Schooler, 1984, p. 3; Atkinson and Kofoed, 1982, p. 356; Schuckit, 1980, 168-169). In addition, studies of alcoholics between ages 40 and 59 suggest increased severity of their drinking problem (Janik and Dunham, 1983, p. 313; Blum and Levine, 1975, p. 38). Health problems and increased dependency are likely to restrict the range of available coping responses.

In much the same manner, it has been suggested that a belief in personal control over the forces which influence an individual's life will facilitate an active approach in coping with stress (El-Shiekh et al, 1989, p. 116; Kobasa and Puccetti, 1983, 840; Lefcourt, 1982, p. 2). Control may be viewed as both a generalized belief, defining the individual's perception of his/her ability to influence important life events, or as a reflection of the individual's perceived

ability to manage a specific situation (Folkman, 1984). It has been suggested (Folkman, 1984, p. 841) that generalized beliefs concerning control are likely to be most influential in defining an individual's response to stress when the circumstances of that situation are new or ambiguous. When ambiguity is limited, situational factors are likely to be the major determinants of response. Ultimately, both generalized beliefs and situational assessments of control are seen as influencing the response to stress. While data concerning those who are retired (Schnore, 1985, p. 58) and who are alcoholic (Butts and Chotlos, 1973; Goss and Morosko, 1970) is mixed, it is hypothesized that older alcoholics with a greater potential for alcohol dependency will reflect a more limited perception of control. This external orientation has been related to increased difficulties in managing stress (Donovan and O'Leary, 1978, p. 761).

Self-esteem is a generalized attitude about oneself (Cronkite and Moos, 1984; Pearlin and Schooler, 1978) which can be helpful in withstanding threat. As with other resources identified, it is important both in appraisal and in defining response options. Available studies are contradictory (Mutran and Reitzes, 1981; George, 1980, p. 21-22; Troll, 1975, p. 66), but it is hypothesized that alcohol abuse is likely to be accompanied by strains in other life areas and that this is likely to diminish the individual's sense of self-esteem.

Finally, social support has been suggested as a buffer against stress (Pearlin et al, 1981; George, 1980), but the exact nature of the relationship with coping remains uncertain (Lazarus and Folkman, 1984, p. 243-251). Multiple definitions of social support have been offered. Lin et al (1986, p. 29-30; 1979, p. 104) define social support as support accessible to an individual through social ties to other individuals, groups and the larger community. Cobb (1976, p. 300) suggests that social support is information which leads the individual to believe he is cared for and loved, esteemed and valued, and belongs to a network of communication and mutual obligation. Thoits (1982a, p. 147) indicates that support is a multidimensional phenomenon which may be defined in terms of types of support (socioemotional or instrumental), the sources of support, and the structure of the support network. Thoits and others (eg., El-Shiekh et al, 1989, p. 116; Krause, 1986a) have noted that divergent findings in assessing the relationship of social supports to stress and coping or illness may be due, at least in part, to these differences in conceptualization and subsequent measurement.

For the purposes of this study, social support will be conceptualized as the degree to which the person's basic needs for affection, esteem, belonging, identity and security are met through interaction with others (Thoits, 1982a and 1982b; Kaplan et al, 1977). Retirement literature underscores the importance of social supports in defining adjustment (Osipow et al, 1985, p. 107; George and Maddox, 1977, p. 457;

Lowenthal et al, 1975, p. 231), but a number of studies report that retirement has only a limited impact on social resources (Wan, 1982, p. 110; Crawford, 1972, p. 379). Limited data would suggest a restriction of social supports among the alcoholic (Cassidy, 1984; Brown and Chiang, 1983), however, a substantial body of research has stressed the importance of social supports in defining the individual's adjustment in recovery (Moos et al, 1990, p. 224; Wallace, 1989, p. 331).

### Research Literature

#### Stress and Alcohol

The process of aging has frequently been associated with decline, retrenchment and loss. As such, it is assumed to be a stressful period in life (Peck, 1979), and the changes which take place are often cited as the cause of such problems as alcoholism (Dupree et al, 1984; Finney and Moos, 1984; Gaitz and Baer, 1971). However, available research would seem to contradict this perception. George notes (1984, p. 11-12) that most research indicates the elderly experience fewer life events than the young. Similarly, Chiriboga and Cutler (1980) noted a decrease in life events with age. Younger respondents in their study reported more stress than either those in middle-age or the elderly. This was also noted in an earlier analysis drawing on the same data (Lowenthal et al, 1975, p. 166). A similar phenomenon has been implied in studies of

alcoholic populations (Atkinson and Kofoed, 1982; Ablesohn and van der Spuy, 1978; Linn, 1978) which note that the older alcoholic is generally less anxious or depressed, and is more compliant within the treatment setting. However, small samples and the lack of controls make inferences difficult.

While it has been noted that those life events which do confront the elderly tend to take the form of major transitions (George, 1980), others have indicated that, particularly in the case of retirement, some of these transitions are normative, anticipated and planned for, and are viewed positively (House and Robbins, 1983, p. 182). As a result, their impact may not be as negative as previously believed. In addition, research suggests that chronic stress, encountered in the broad range of life roles and more evenly distributed across the lifespan, may be more predictive of functioning than the single life event (Chiriboga and Cutler, 1980, p. 358). However, within the context of this study, House and Robbins (1983, p. 181) point to the fact that stress is not a unidimensional phenomenon. An event is defined within a given context and depends for its meaning on the values, attitudes and perceptions of the individual (Folkman and Lazarus, 1980; George, 1980; House, 1974). In assessing the impact of retirement on the individual, it is important to recognize the changing social context within which the event occurs, in particular the changing attitudes toward retirement, the availability of retirement income and social supports (Foner, 1983, p. 77-79). To the extent that such

events are viewed as stressful, it must be in terms relevant to the individual experience: the degree of change engendered by the event and the extent to which goals have been met (Howard et al, 1982), as well as perceptions of control, timing and the stage of the process encountered (Minkler, 1981).

### Retirement

Retirement would appear for most to be a positive experience. Between 1950 and 1983, labor force participation dropped from 40% to 18% for those over 65 (Parnes and Less, 1985, p. 1). It is also estimated that among those who retire, only 25% to 30% experience problems in adjustment and that limitations in health and income are the primary sources of difficulty (Keith et al, 1984, p. 81; Foner and Schwab, 1983, p. 74; Minkler, 1981, p. 122; Kasl, 1980, p. 170). This would seem to hold true regardless of the measure used. However, in addition to health and income, a number of other factors have been related to adjustment. Those who are married and better educated appear to experience fewer difficulties in managing the transition (Howard et al, 1982; George and Maddox, 1977). The timing of retirement would also seem to be important (Price et al, 1979; Bourque and Back, 1977). It has been suggested that those who retire earlier than planned, particularly if they do so involuntarily, experience less satisfaction. Voluntary retirees, on the other hand, generally reflect more planning for retirement,

have greater financial resources and better health, have better feelings about the retirement experience and relate more family support (Kimmel et al, 1978). More recent efforts to establish the relationship between timing and adjustment to major life events have provided only limited support (Rook et al, 1989), suggesting that timing may be only one of a number of factors which converge and ultimately define the response to major life events such as retirement. Similar factors influence both satisfaction and identity/well-being. Satisfaction with life is associated with younger age, having retired as planned, the absence of health problems, adequate income and a higher education level (Barfield and Morgan, 1978). In addition to these, identity and well-being have been related to community involvement, as well as friendship and marital roles (Mutran and Reitzes, 1981).

It has also been suggested (Howard et al, 1982, p. 492) that adjustment to retirement may be easiest when life change is minimized. In this regard, military retirement may fall short. Although empirical data is extremely limited, clinical reports suggest that military retirement may be problematic for as many as one-third of those involved (Kilpatrick and Kilpatrick, 1979; Dunning and Biderman, 1973; Berkey and Stoeber, 1968; Greenberg, 1965). In an exploratory study, Doherty (1982) found that one-third of his sample experienced significant problems in adjustment to retirement, while only 20% comfortably manage the transition. Factors which are

cited as unique to the military include the young age at retirement, the presence of school-age children, the structured nature of military life with clearly defined roles and responsibilities, the potential problems in securing employment at a level comparable with past status, limited transferability of some job skills, the severing of established relationships, and the likely necessity for movement to a new community (Kilpatrick and Kilpatrick, 1979, p. 283; Schlenoff, 1977; McNeil and Giffen, 1967, 1965a and 1965b). It has also been suggested that a significant number of those who retire prior to the mandatory thirty-year point have been passed over for promotion and, in those cases, retirement may be a tacit recognition of failure (Kasl, 1980; Berkey and Stoebner, 1968, p. 5). Finally, these multiple adjustments occur at a time which may, under other circumstances, be particularly stressful. Chiriboga and Cutler (1980, p. 350-351) noted in their study of stress and adaptation across the lifespan that those in middle-age reflected the greatest increase in both positive and negative stress of any age group. In contrast to the civilian experience, retirement from the military represents a mid-life career change (Kasl, 1980, p. 143; Dunning and Biderman, 1973), rather than an end to the work experience.

## Coping

Studies which have examined coping processes have reported a number of factors which are likely to influence coping responses. In their community study, Pearlin and Schooler (1978) found that coping was correlated with gender. Women used less effective coping mechanisms than men and more frequently chose those coping responses which failed to alleviate identified stressors. Conte et al (1991) in a comparison of personality traits and coping styles of hospitalized alcoholics and non-alcoholics found that the vast majority of differences between alcoholics and non-alcoholics were attributable to differences between male and female alcoholics in coping styles, personality variables and conflict. Alcoholic women rated themselves as experiencing greater conflict and as being more depressed, submissive, and passive than did non-alcoholic women. Similar differences were noted between alcoholic men and women. Male alcoholics were found to use more direct problem-solving behaviors in response to stressful situations. Gender differences were also noted in a study by Carver et al (1989) which found that women had a greater tendency to focus on and vent emotions and to seek social support than did men. Similarly, Folkman and Lazarus (1980) found that men used problem-focused coping more frequently in work situations and in situations which were perceived as requiring acceptance or more information.

Differences were not large and there was no significant variation between men and women in the use of emotion-focused coping mechanisms. In light of this, gender differences in the use of problem-focused coping were attributed to differences in the nature of the work experience. This has been supported by the findings of a number of researchers (Rosario et al, 1988; Shinn et al, 1984; Siegler and George, 1983) which revealed no gender differences in coping among people confronting stress in similar life contexts.

Those few studies which have specifically examined the role of age in defining coping skills have not demonstrated a consistent correlation (McCrae, 1989; McCrae, 1982). While the sources of stress appear to change with age (more losses/threats, fewer challenges), coping appears comparable between age groups when the nature of the stress is controlled (El-Shiekh et al, 1989, p. 116). Cath (1983, P. 213) stresses that older individuals retain an impressive capacity to adapt to changing demands, a fact which has been emphasized by research findings which suggest that the best predictor of coping behavior in old age is the individual's coping behavior when he/she was younger (Fry, 1986, p. 182).

Finally, a number of studies have suggested that socioeconomic status may have an impact on the coping repertoire (Holahan and Moos, 1987; Cronkite and Moos, 1980; Pearlin and Schooler, 1978). It has been suggested, but not tested, that educational and economic factors provide greater

opportunity to develop and exercise a broad range of coping responses. However, Billings and Moos (1984) found no such correlation in their study of coping and depression.

Situational factors also appear to influence the use and effectiveness of particular coping responses. Active coping appears to be more effective in personal, rather than impersonal situations and psychological resources would seem to be most important in situations which are perceived as less amenable to control (Pearlin and Schooler, 1978). Similarly it has been noted that work environments are more conducive to problem-focused coping, while situations relating to health draw more readily on emotion-focused responses (Folkman and Lazarus, 1980).

With regard to the consistency of coping across situations, the findings are mixed. The cognitive-phenomenological model places emphasis on both person and situation factors, and consistency is seen as dependent upon the relative contribution that each makes in determining subsequent behavior (Folkman and Lazarus, 1980). To the extent that personal factors are predominant, coping is likely to be more consistent across situations. If contextual factors are paramount, coping will be more variable. Based on their study, Folkman and Lazarus (1980) suggest that there are elements of both consistency and variability across situations. This has been noted by others (Carver et al, 1989; Pervin, 1987; Folkman et al, 1986; Laux and Vossel,

1982; Haan, 1982; Moos and Billings, 1982), and is implicit in the work of McCrae (1984) which reflects greater consistency in coping responses across situations when type of stressor (eg., threat, loss, challenge) is controlled. Complicating interpretation, however, is the suggestion (Vitaliano, 1990) that examination of situation versus person factors as they influence coping may be clouded by the overriding impact of the "predicament" which defines a particular group (eg., suicidal, alcoholic, etc.). As a result, differences which would normally be distinguished in responses to different types of stressors may be difficult to observe. Despite the above it would appear that, while situational factors define the parameters within which coping occurs, individuals appear to draw on relatively stable resources in defining their responses and, as a result, are likely to rely more consistently on some coping mechanisms than on others.

Finally, recent articles have addressed the possible stress buffering or moderating effects of coping (Billings and Moos, 1984; Shinn, 1984; Menaghan, 1983, p. 124-126). Baron and Kinney (1986, p. 1176) indicate that a variable serves as a mediator to the extent that it accounts for the relation between a predictor variable and a criterion variable. A moderator, on the other hand, produces its effect only under certain circumstances. As Menaghan indicates (1983, p. 124), if coping serves to mediate the relationship between stressor

and outcome, all are likely to benefit from efforts to enhance coping abilities. If, on the other hand, coping has a moderating function, benefits will be differentially distributed. Pearlin et al (1981) reported a buffering effect of coping in their study of job disruption and similar, though small, effects have been reported by Aldwin and Revenson (1987) and Rohde et al (1990). However, Menaghan (1982) found no such effect in her study of marital coping, nor did Schinn et al (1984) in their examination of coping efforts in response to job stress and burnout. At least in part, this divergence in findings may be attributable to differences in conceptual orientation, instruments and setting.

### Resources

#### Health:

The relationship between health and retirement is a well established one (Howard et al, 1982, p. 495) and it has long been recognized that health is a major factor influencing adjustment to retirement (Kasl, 1980, p. 161). However, it has also been noted that methodological difficulties inherent in existing research make it difficult to establish whether retirement has a positive or negative impact on health (Minkler, 1981, p. 124-125). With regard to the abuse of alcohol, research appears somewhat more consistent. Janik and Dunham (1983, p. 313) found that middle-aged alcoholics, those

between 40 and 59, scored higher than younger or older alcoholics on measures of quantity/frequency of consumption, self and counselor evaluation of the severity of their problem and impairment. Similarly, Blum and Levine (1975, p. 38) found that middle-aged alcoholics were likely to have a longer-standing problem and one that was more readily recognizable. Accidental injuries, malnutrition and physical deterioration may accompany the abuse of alcohol (Atkinson and Kofoed, 1982, p. 356) and the potential for cognitive impairment would appear to increase with the level of use (Wilkinson and Sanchez-Craig, 1981; Guthrie and Elliott, 1980; Page and Linden, 1974; Jones and Parsons, 1971). These latter studies suggest that alcoholics have greater difficulty than non-alcoholics in performance on tests of abstract reasoning. It has also been suggested that even when these cognitive deficits are reversible, they are likely to persist for some time following cessation of alcohol use (Becker and Jaffe, 1984).

Finally, while studies in the general population suggest that alcohol use does not seem to interfere with the ability to cope with stress (Huffine et al, 1989), a number of researchers have suggested a relationship between alcohol dependency, cognitive deficits and limitations in coping skills (Cooper et al, 1988, p. 225; Sanchez-Craig and Walker, 1982, p.47; Twentyman et al, 1982, p. 325; Williams et al, 1982, p. 498-499; Litman et al, 1979, p. 91). Recent

attention, however, has been most clearly focused on the relationship between coping behaviors and the potential for relapse following treatment. Specifically researchers have noted that poorer outcome in recovery appears to be associated with decreased use of active-cognitive coping responses and increased use of avoidance coping (Moos et al, 1990, p. 229; Monti et al, 1989, p. 18). It has also been suggested, though, that those who have been successful in long-term recovery demonstrate few differences from the general population in their capacity to adapt (Moos et al, 1990).

#### Perceptions of Control:

A number of researchers have pointed to the important impact that expectancies of control or a sense of mastery can have on the response to stress (Lazarus and Folkman, 1984, p. 159; Pearlin et al, 1981, p. 345; Pearlin and Schooler, p. 12). Lefcourt notes that a perception of helplessness (external orientation) is a natural response to deprivation and is likely to be associated with immature and ineffectual coping behavior (Lefcourt, 1982, p. 25-26). Supporting this are findings (Moos and Billings, 1982, p. 216) which indicate that the relationship between life events and depression is greater in those who perceive limited control. While it was long assumed that perceptions of control decreased with age as a consequence of decline in personal/social resources, recent studies would suggest a more complex picture. Aldwin

(1991) found in her study of 228 adults that older adults did in fact perceive less control, but noted that this was only one factor influencing coping. Despite a lessened sense of control, older persons made less use of escape coping and there was no significant difference in their use of instrumental coping. Petrosky and Birkimir (1991) found that expectancies of control evolved as people aged, with older people displaying a greater sense of personal control and using more problem-focused coping. Patterson et al (1990), on the other hand, found that while there were no differences in perception of control among older individuals, very old individuals did employ fewer problem-focused coping responses than did younger persons. Still others (Blanchard-Fields and Irion, 1988) have found that age acted as a moderator of the relationship between locus of control and coping responses in stressful situations. With regard to retirement, Schnore (1985, p. 58) found no significant difference between workers and retirees on a measure of locus of control in his study of 750 men and women. Research findings are inconsistent with regard to alcoholics. Studies have found both an external orientation (Chess et al, 1971; Butts and Chotlos, 1973) and an internal orientation (Gozali and Sloan, 1971; Goss and Morosco, 1970) among alcoholics. Donovan and O'Leary (1978, p. 761) indicate that an external orientation in alcoholics has been associated with greater anxiety, self-criticism, increased depression and problems in dealing with stress.

**Self-Esteem:**

Pearlin and Schooler (1978) found that positive self attitudes were associated with a more effective coping response and this was confirmed in a subsequent reanalysis of their data (Pearlin and Schooler, 1979, p. 203). With regard to the impact of retirement on self-esteem, results have been conflicting. George (1980, p. 21-22) and Palmore et al (1984, p. 115) suggest that self-esteem is fairly stable across the adult life span. Berkey and Stoebner (1968, p. 6) identify a decreased sense of self-worth and feelings of loss as major components in the clinical picture of patients encountering problems in adjustment to retirement. Mutran and Reitzes (1981, p. 739) also note a decreased sense of well-being among retirees in their analysis of data from a national survey. Finally, Troll (1975, p. 66) suggests a curvilinear relationship between age and self-esteem.

**Social Supports:**

Consistent with the other measures of coping resources, findings of research relative to social supports has been mixed. As already noted, this may be due in part to conceptual and definitional differences resulting in divergent measurement techniques (Thoits, 1982a). Krause (1986a) has also stressed the importance of disaggregating social support measures in order to identify those factors which are most relevant. Complicating this is the absence of substantive

theoretical explanations for the relationship of social supports to stress and coping (Lin et al, 1979). It has been suggested (Krause, 1986a; Gore, 1978) that social support promotes better understanding of stressful situations, encourages expanded consideration of options for responding and reinforces positive self-feelings. Lin et al (1979, p. 110) suggest that social supports may either reduce the likelihood of encountering stressful events or serve to control interpretations of events and the emotional responses to them after they have occurred.

Both Wan (1985, p. 103; 1982, p. 110) and Crawford (1972) found that retirement had a negligible impact on the magnitude of the social support network. Similarly, in their study of the impact of role loss on coping resources, Elwell and Maltbie-Crannell (1981) note that, among men in their study, the only area of loss was in formal group participation. Job loss did not result in any appreciable change in family participation, either in this study or in one by Keith et al (1984). However, George and Maddox (1977, p. 461) suggest the important role that social resources play in predicting adjustment in retirement and similar benefits have been suggested in research on transition by Lowenthal et al (1975, p. 231) and on occupational stress by Osipow et al (1985, p. 107). With regard to alcoholics, Brown and Chiang (1983, p. 6) suggest that substance abusers may have a greater potential for disrupted social networks and Cassidy (1984) found that

late-onset alcoholics had a more constricted social network than non-alcoholics. Moos et al (1990, p. 129) has stressed the importance of social resources in conjunction with the use of active coping responses in promoting remission of alcoholism, and this finding has been supported by the work of other researchers (Fagan and Mauss, 1986; Page and Badgett, 1984; Mallams et al, 1982).

The potential moderating effect of social supports in defining the impact of stress on health has been a recurring issue in the literature (Billings and Moos, 1984; Sarason et al, 1983; Thoits, 1982a; Williams et al, 1982). As in the case of coping, it has been suggested (LaRocco et al, 1980) that the impact of social support in reducing dysfunction or facilitating coping may be variable across differing levels of stress (Baron and Kenny, 1986). Thoits (1982a, p. 148-149) indicates caution in interpreting these results given the confounding of most life event measures with measures of social support. While a number of recent studies (Blake and Vandiver, 1988; Billings and Moos, 1984; Thoits, 1982b; Williams et al, 1982; Lin et al, 1979) have not found evidence for a moderating or buffering effect, Krause (1986a), as a result of disaggregating his measures of social support and stress, found that specific dimensions of social support may buffer the effects of specific life events. Further, Blake and Vandiver (1988) did find evidence to suggest that social support may well moderate the harmful impact of avoidant

coping on health.

It should also be noted that, although she found no evidence of a moderating effect of social supports, Thoits (1982b, p. 358) did find strong support for the hypothesis that relatively disadvantaged (vulnerable) sociodemographic groups are more reactive to the effects of life events. Older adults, women, the unmarried and those with less education, income and occupational prestige were significantly more reactive to stress. This would seem to be consistent with a formulation of differential reacting capabilities offered by Lin et al (1979), as well as with more recent findings by Riley and Ekenrode (1986) and Camasso and Camasso (1986). Among the vulnerable, it may be that stressors further weaken already low levels of support, while similar events among the more advantaged result in the extension of social supports.

In addition to the above, available data would suggest that the resources identified do not independently mediate the relationship between stress and coping, but may themselves be partially dependent on levels of the other resources. While current information is limited, the reciprocal nature of the relationships involved in the stress-coping process is increasingly being recognized (Lazarus and Folkman, 1984; Billings and Moos, 1984, p. 888; Pervin and Lewis, 1978, p. 14-16). A number of researchers have noted that perceived social supports are negatively related to both mental and physical illness (Stoller, 1984; Cronkite and Moos, 1984; Lin

et al, 1979; Gore, 1978) and are positively related to self-esteem (Lakey and Cassady, 1990, p. 339; Dunkel-Schetter et al, 1987, p. 77). Smith et al (1990) found, in their study of negative life events and athletic injuries, that only when social supports and coping skills were examined in conjunction with each other did they demonstrate a moderating effect. Similarly, Delongis et al (1988) found that high levels of emotional support and self-esteem moderated the relationship between daily stress and physical symptoms. Jylha et al (1986) have noted the predictive value of psychic well-being, a composite of four scales including the Rosenberg (1965) Self-Esteem Scale, in relation to individual assessments of health. Measurements of hardiness, which is a composite of scales including locus of control, have also been found to be negatively related to illness (Kobasa and Puccetti, 1983). However, findings reported by Krause (1986b) suggest that the relationship between locus of control and health, as measured by depressive symptoms, may be curvilinear. Health has also been shown to have an impact on other variables as well. Tornstam (1975) used path analysis in measuring the impact of three health variables (objective health, subjective health and aspiration level relative to health) on self-perceptions, including a measure of self-esteem, and found each to be a significant predictor. Elwell and Maltbie-Crannell (1981) hypothesized, but did not find a significant impact of health on social supports. However, their measures tapped only

frequency and sources of contact, not the type, quality or nature of the social supports available. Finally, Lefcourt (1982, p. 108-109) reports findings which indicated that social supports served a moderating function between life events and depression/anxiety in those who had a strong sense of personal control (internal orientation). For those who perceived themselves to be victims of chance (external orientation), social supports were not significant.

## CHAPTER III

### METHOD OF STUDY

This study employed a correlational, cross-sectional survey design, examining individual responses to stressful situations. The primary purposes of the study were to determine whether there are differences in the way in which alcoholics and non-alcoholics cope with stress, and to assess the impact that contextual issues associated with the decision to retire have on coping responses. However, it was also important to examine the process of coping and to identify elements which serve to mediate the relationship between stress and coping responses. Those factors include not only the severity of the drinking problem, but health, generalized beliefs about personal control, self-esteem and social support as well. Finally, as indicated, retirement itself may have an impact on those resources on which people draw in defining their coping repertoire. In order to examine this aspect, current living circumstances and those contextual factors associated with the retirement decision (eg., retirement timing, control, planning) were included.

### SUBJECT SELECTION

Given the interest in defining the impact of alcoholism

and retirement on coping resources and responses, subjects for this study were drawn from both a treatment population of diagnosed alcoholics and the general population of individuals currently serving on active duty or retired from the Air Force. A total of 589 individuals completed the survey questionnaire. In order to eliminate potentially confounding factors, the sample was limited to enlisted males, grades E-1 through E-9. Despite instructions to the contrary, 22 officers (3.7%) inadvertently received and completed the questionnaire. These were not included in the study sample. Also deleted from the sample were 50 individuals (8.5%) who were not from the treatment population and who had not been diagnosed as alcoholic, but whose scores on the Minnesota Alcoholism Screening Test (MAST) suggested they might in fact be alcoholic (see following section on Measures). Finally, 39 of the surveys (6%) were deleted due to incomplete responses. The total number of surveys used in data analysis was 478.

#### Alcoholics:

Alcoholics were identified from among those admitted for treatment, 1 February - 30 June 1989, at seven inpatient Alcoholism Rehabilitation Centers operated by the Air Force in the continental United States. As a condition of treatment all such individuals must be diagnosed as alcoholic (alcohol abuse or alcohol dependent) as defined in the Diagnostic and

Statistical Manual of Mental Disorders, 3rd Edition, Revised (1987). Of 433 enlisted personnel serving on active duty or retired from the military who were admitted during the time frame noted above, 276 (64%) agreed to participate in the survey, completing the requested voluntary consent forms. A total of 220 treatment participants (51%) subsequently forwarded surveys, of which 192 (44%) were usable. Of those treated during the study period, 40 (9%) were retired from active duty, 30 of these people (75%) agreed to participate, and, ultimately, 28 (70%) completed the questionnaire. Among those still on active duty with the military at the time of their admission for treatment, 241 (61%) signed consent forms and, of these, 164 (42%) completed the survey.

#### Non-Alcoholics:

The non-alcoholic subgroup of active duty personnel and those retired from the Air Force was selected at random by the Directorate of Personnel, Air Force Institute of Technology (AFIT), Wright-Patterson AFB, OH, from computer listings maintained at the Military Personnel Center (MPC), Randolph AFB, TX. Surveys were mailed to a total of 550 people, including 400 persons on active duty and 150 people retired from the Air Force. 369 surveys (67%) were returned, with 263 (66%) from those on active duty and 106 (71%) from those retired from active duty. Of this total, 286 surveys (52%) remained once incomplete surveys and those for individuals

with higher than acceptable Minnesota Alcoholism Screening Test (MAST) scores were deleted. This non-alcoholic subgroup included 211 people on active duty and 75 people retired from the Air Force, and it was this group which was used in the final data analysis with the alcoholic sample noted above.

#### DATA COLLECTION

Data collection was accomplished in two stages. As noted above, alcoholics for this study were identified from among all of those admitted to seven Air Force Alcoholism Rehabilitation Centers in the continental United States. These included treatment centers at Scott Air Force Base, Illinois; Wright-Patterson Air Force Base, Ohio; Andrews Air Force Base, Maryland; Sheppard Air Force Base, Texas; Lackland Air Force Base, Texas; March Air Force Base, California; and Travis Air Force Base, California. Because of the large geographic area served by each of these facilities, individuals were frequently flown in from smaller bases around the country through the military aeromedical evacuation system. All individuals referred for inpatient treatment had been previously diagnosed as alcoholic at their local bases. Treatment programs were structured around a fixed-length, 28-day, inpatient treatment format, preceded by a 3-5 day period of medically supervised detoxification. In order to minimize

the effects of treatment setting and cognitive deficits common during the early stages of abstinence after prolonged alcohol use, individuals were not advised of the research project until their fourth and final week of treatment. Those agreeing to participate completed two copies of a voluntary consent form, one of which they were advised to keep for their records. The second copy of the consent form was forwarded to the researcher and the individual's name was added to a mailing list of volunteers. Approximately four weeks later, following return to their local communities, the survey questionnaire was forwarded for completion. Completion of the questionnaire took approximately 30-35 minutes. The same questionnaire was forwarded to others on active duty and retired from the Air Force who had been selected at random from computer listings maintained at the Military Personnel Center, Randolph Air Force Base, Texas.

Participation was entirely voluntary for all subjects. Prospective subjects were advised that they could refuse to participate or could end their involvement at any time without penalty. No identifying information was requested on the survey instrument itself. A return postcard with the participant's name was included in each survey packet. Once the questionnaire was completed and returned to the researcher, respondents were asked to mail the postcard separately to insure anonymity while allowing removal of their name from the list of study participants. Approximately four

weeks after the initial mailing a reminder postcard was forwarded to individuals whose names remained on the mailing list. Finally, four weeks later, a second survey packet was mailed to all those who had not been removed from the mailing list.

### MEASURES

#### Health:

Health was measured using four items from the physical health domain of the Philadelphia Geriatric Center Multilevel Assessment Instrument (Lawton et al, 1982). Designed to assess the overall well-being of older persons living in the community, the Multilevel Assessment Instrument (MAI) addresses seven domains: physical health, cognition, activities of daily living, use of time, social relations and interactions, personal adjustment and perceived environment. Reliability (alpha) of the full, 31-item physical health domain was found to be .74, with retest reliability of .95 (Lawton et al, 1982, p. 96). Reliability of the self-reported health subscale was .76, with retest reliability of .92. Internal validity was .47 for the self-reported health subscale. The ability to discriminate between dependent and independent groups was felt to be "substantial" (Lawton et al, 1982, p. 95) and correlations between a summary of the independent blind ratings of clinicians and administrators and

the MAI scales were reported as .67 for the self-reported health subscale (Lawton et al, 1982, p. 96-97). While some items included in the full length physical health domain index are relevant primarily to an older population, items found in the self-report health subscale are of a general nature and are appropriate for comparisons between, as well as within, age groups. Higher scores on the self-report health subscale indicate a more positive perception of individual health. Alpha for this administration of the four-item, self-reported health subscale was .73.

#### Self-Esteem:

The Rosenberg Self-Esteem Scale (Rosenberg, 1979, p. 291-295; Rosenberg, 1965) is an instrument in which respondents are asked to identify their level of agreement with ten items related to their self-attitude. The Likert response format ranges from "Strongly Agree" to "Strongly Disagree". Item responses are scored in such a way that higher scores reflect a stronger sense of self esteem. Test-retest reliability was reported to be .85 and, according to the author (Rosenberg, 1965, p. 17), the reproducibility of the scale was .92 and the scalability was .72, coefficients which were satisfactory in terms of established criteria. Scores on this scale were negatively correlated with measures of depression and neuroticism, and were positively correlated with measures of "peer group reputation" (Rosenberg, 1965, p. 25), including

leadership and social participation. While factor analysis of this scale has suggested the existence of two factors (Carmines and Zeller, 1979, p. 63-69), tentatively labeled positive and negative esteem, correlations between these two factors and sixteen external variables support the construct validity of this scale and indicate that the ten items measure a single theoretical dimension of self-esteem. Alpha for this administration of the ten-item, Rosenberg Self-Esteem Scale was .86.

#### Control:

Generalized beliefs concerning control were measured by a seven-item Mastery scale constructed by Pearlin and associates (Pearlin and Schooler, 1978; Pearlin et al, 1981) for use in their longitudinal community survey of 2300 Chicago adults between the ages of 18 and 65. As reported (Pearlin et al, 1981, p. 340), mastery refers to a generalized belief on the part of individuals concerning the extent to which they, rather than fate or powerful others, are in control of the forces which influence their lives. Using a four-point Likert scale, subjects indicate the strength of their agreement or disagreement with the statements. Items are scored in such a manner that higher ratings reflect a stronger sense of mastery. The authors used LISREL to develop measurement models of this and other constructs and to test the invariance of the factor structure at two points in time

(Pearlin et al, 1981, p. 352). Results supported the unidimensional nature and reliability of the measure. The correlation between time 1 and time 2 measures was .44. Factor analysis of the items using principal component analysis with varimax rotation resulted in item loadings ranging from .76 to .47 (Pearlin and Schooler, 1978, p. 20). Subsequent use of this scale by Folkman et al (1986, p. 573) in a separate longitudinal study involving 85 married couples indicated that the internal consistency of the scale (alpha) was .75. A decreased sense of mastery has been associated with both increased depression following job disruption (Pearlin et al, 1981) and increased stress as a result of role strain in the areas of parenting, marriage, home economics and work (Pearlin and Schooler, 1978). In addition, Folkman et al (1986) found that mastery was significantly, negatively correlated with psychological symptoms as measured by the Hopkins Symptom Checklist. For the current administration of the Mastery Scale, alpha was .79.

#### Social Support:

Social Support was measured using the Instrumental-Expressive Support Scale developed by Lin and Associates (Lin et al, 1986; Lin et al, 1981; Dean et al, 1981). Comprised of 28 items, the scale addresses those aspects of an individual's experience which reflect the quality of their instrumental and expressive support systems. Scale

development stressed the need for an instrument which would be appropriate for use with subjects drawn from diverse demographic backgrounds and, as such, was felt to be particularly useful in this study. Reliability and validity of the scale were assessed using a representative sample of 1091 individuals drawn in 1979, 871 of which were retested in 1980. Total alpha for the scale indicated high reliability in both sets of data, .89 in 1979 and .93 in 1980. All items were negatively correlated with depression and the total scale correlation remained constant over time,  $-.58$  in 1979 and  $-.59$  in 1980 (Lin et al, 1986, p. 132-133). Factor analysis of the 1979 data revealed six factors which accounted for 62% of the variance in the 28 items. Subsequent factor analysis of the 1980 data reflected some differences in the factor structure. Drawing on both sets of data, a composite factor structure was developed. The five factors defined included an excess of responsibilities/demands, lack of money, unsatisfactory intimate relations, lack of involvement and family problems. The correlation of each item in the factor with the factor itself indicated high internal consistency with correlations ranging from .6 to .89. Alphas for three of the factors were high and consistent over the two testing periods, .74 to .83. Two of these were instrumental factors, reflecting an excess of demands/responsibilities and a lack of money. The expressive factor addressed unsatisfactory intimate relationships. It was also found that the

Instrumental-Expressive Support Scale was correlated (.55) with the Medalie-Goldbourt Scale, which identifies family problems, suggesting that it taps similar, but more specific areas within the support dimension (Lin et al, 1981, p. 81). Finally, the Instrumental-Expressive Support Scale was found to be significantly negatively correlated with the Gurin Scale, a general psychiatric symptom inventory (Lin et al, 1981, p. 80).

In the present study, the 28 items of the Instrumental-Expressive Support Scale were presented using a Likert response format with item ratings ranging from "Most of the Time" (scored as 1) to "Never" (scored as 5). Higher scores on individual items thus reflected fewer problems in accessing instrumental or expressive support. Principal component analysis with varimax rotation was used to define the factor structure. Factor analysis was conducted using all 478 subjects included in the study sample. The resulting standardized scoring coefficients were then used to compute factor scores. Five factors were identified accounting for 54.92% of variance. These factors were very similar to those identified in the composite factor structure noted above. The first factor, accounting for 30.65% of variance, was labeled "Unsatisfactory Intimate Relations" and included such items as "Not having someone who shows you love and affection" and "Not having a close companion". The second factor, "Lack of Autonomy", accounted for 8.05% of variance and included

"Feeling too controlled by others" and "Not having enough responsibilities". "Lack of Money" was the third factor and accounted for an additional 6.41% of variance. It included items like "Having problems managing money" and "Not having enough money to get by on". The fourth factor, accounting for 5.24% of variance, was identified as "Too Many Demands". It included items such as "Too many demands on your time" and "Having too little leisure time". The final factor, "Family Problems", included "Problems with children" and "Problems with spouse/ex-spouse" and accounted for an additional 4.58% of variance.

#### Extent of Alcohol Use:

The Michigan Alcoholism Screening Test (MAST) was used to assess drinking history and to identify those in the study sample likely to be alcoholic. It is a self-administered, 24-item instrument. Items are weighted and, when summed, a score of 5 or higher has been seen as suggestive of alcoholism. Initial tests (Selzer, 1971) involved 307 subjects, including alcoholics, those convicted of driving-under-the-influence, drivers convicted of multiple moving violations and a control. The MAST successfully discriminated between alcoholics and non-alcoholics as determined both by category and review of medical, motor vehicle and police records. Analysis of reliability and validity of the MAST (Selzer et al, 1975) involved 501 subjects. Reliability of the instrument was

assessed using coefficient alpha and resulted in coefficients of .83 for the non-alcoholic group, .87 for the alcoholic group and .95 for the sample as a whole. Subsequent examination using non-alcoholics and hospitalized alcoholics as criterion groups resulted in a validity coefficient of  $r = .90$  ( $\gamma = .99$ ). Correlations with age and social desirability proved to be negligible. Item analysis of the MAST (Zung and Charalampous, 1975) supported the internal validity of the instrument and it has been found more effective than the MacAndrew Alcoholism Scale in discriminating between alcoholics and non-alcoholics (Friedrich and Loftsgard, 1978). Factor analysis of the scale (Friedrich et al, 1978) revealed six factors, three of which addressed criteria for alcoholism established by the National Council of Alcoholism. While a short form of the MAST has been identified (Selzer et al, 1975), the items deleted would appear to include those likely to address severity within an alcoholic population. Hence the long form was used in this study. Alpha for this administration of the MAST was .92. It has been reported that in a number of studies use of the standard score of 5 has resulted in an unacceptably high false-positive rate (Jacobson, 1989, p. 23). For purposes of this study, scores of 8 or higher were used to distinguish those persons likely to be alcoholic. Use of this cutoff score correctly identified all those in the sub-sample of people referred for inpatient alcoholism treatment. Those in

the non-alcoholic sub-sample with scores above the cutoff were deleted from the data analysis to minimize potential confounding.

#### Context of the Retirement Decision:

A number of items were included in this study in an effort to define the timing of the retirement decision, perceived control over that decision and the extent of planning in advance of the event. Items were suggested by or drawn from multiple sources (Doherty, 1982; Pearlin et al, 1980; McPherson and Guppy, 1979; Price et al, 1979; Kimmel et al, 1978; Streib and Schneider, 1971; Barfield and Morgan, 1969). However, a report authored by Sharp and Biderman, The Employment of Retired Military Personnel (1966), was particularly useful in defining items for use in this study.

#### Current Living Conditions:

These items address current income and employment. Item wording follows guidelines suggested in Sudman and Bradburn (1982, p. 174-206). Also included were three items which were intended to form a scale assessing residential and job stability. Alpha for this scale was .69.

#### Coping Responses:

The instrument used in measuring the dependent variable was an abbreviated version of the Ways of Coping Checklist

(Folkman and Lazarus, 1980; revised by Vitaliano et al, 1985). In its most recent version (Lazarus and Folkman, 1984), the Ways of Coping Checklist (WCC) is a 68-item instrument with a Likert response format in which individuals assess the extent of their use of various cognitive and behavioral responses to a particular stressful experience they have encountered within the past six months. Item ratings range from "Not at all" (scored as 0) to "Used a great deal" (scored as 3). In completing the WCC, a brief description of the stressful event is requested, identifying what happened, where it occurred (work, home, etc.), who was involved and the aspect of life most directly affected by the event (job, family, health, finances, etc.). In addition, respondents are asked to rate the severity of the stressful event and assess the extent to which the situation was one they could influence or control. Internal consistency of the original 68-item instrument (Folkman and Lazarus, 1980) was evaluated through assessment of inter-rater agreement on problem-focused and emotion-focused items, use of the scale in field tests, factor analysis of the two factors, and use of Cronback's alpha. Mean alpha for two administrations of the problem-focused scale was .80, and .81 for the emotion-focused scale. Correlation between the two scales was .44, indicating there was enough variance to support independent use.

A number of researchers have since examined the factor structure of the Ways of Coping Checklist in greater depth

(Wright, 1990; Scherer, 1988) and identified a more complex factor structure. Vitaliano et al (1985) found a total of seven scales. However, face validity of certain items in the original scales was lacking and intercorrelation between some scales was high, making it difficult to assess coping multidimensionally. Also, the length of the checklist was problematic. Vitaliano et al (1985) used factor analytic and rational approaches in revising the scales, reducing the total number of items to 42. Five factors were identified: problem-focused, blamed self, wishful thinking, seeks social support, and avoidance. In comparing the internal consistency of the original and the revised checklists, the coefficient alpha for each of the revised scales was equal to or higher than the original. Mean alpha in two tests was .82 and .83. Shared variance between scales on the revised instrument was 20-40% lower. Construct validity of the revised scales was assessed by replicating associations found with the original scales. The revised problem-focused scale was negatively correlated with depression and anxiety, while wishful thinking was positively correlated with those items.

As in the work of Vitaliano et al (1985), the present study examined the 42 items of the revised Ways of Coping Checklist using principal component analysis with varimax rotation. Given evidence suggesting differential coping responses depending on whether the stressor represents a threat, loss or challenge (McCrae, 1984), respondents were

asked to identify an event in which they faced some kind of a threat or danger. As with the social support instrument noted above, factor analysis was conducted using all 478 subjects included in the study sample. The resulting standardized scoring coefficients were then used to compute factor scores. Items loaded on five factors closely conforming to previous findings and accounted for 46.11% of variance. The first factor, (21.64% of variance) was labeled "Wishful Thinking" and include such items as, "Wished that the situation would go away or somehow be over with" and "Had fantasies or wishes about how things might turn out". A second factor, labeled "Growth" and accounting for an additional 10.85% of variance, included such items as "Changed or grew as a person in a good way" and "Realized I brought the problem on myself". The third factor (5.36% of variance), identified as "Active Coping", included "Stood my ground and fought for what I wanted" and "Came up with a couple of different solutions to the problem". "Seeks Social Support", the fourth factor, accounted for an additional 4.68% of variance and included items such as "Talked to someone about how I was feeling" and "Talked to someone to find out more about the situation". The fifth factor was labeled "Cognitive Coping" and accounted for 3.57% of variance. It included "Looked for the silver lining, so to speak; tried to look on the bright side of things" and "I tried to keep my feelings from interfering with other things too much".

### DATA ANALYSIS

As noted previously, the two primary aims of this study were to assess differences between male alcoholics and non-alcoholics serving on active duty or retired from the military in terms of their coping responses to stressful situations, and to determine if these differences could be accounted for by variations in the range of personal and social resources available. Among those retired from the military, it was also felt that the context of retirement (eg., timing, control, planning) would be an important factor defining the resources available in coping with stress. In addressing these issues, data was analyzed and will be presented in the following manner:

- 1) Descriptive statistics, including frequencies and percentages, measures of central tendency and measures of dispersion were used to summarize data and to assess the degree to which the sample reflected the population under study. In order to establish a basis for drawing subsequent inferences, characteristics of various subsamples were compared with known characteristics of the populations from which they were drawn. Those alcoholics and non-alcoholics on active duty with the Air Force included in the study were compared with all enlisted persons serving on active duty at that time (Air Force Magazine, 1990) on such variables as

rank, education, racial composition and age. Characteristics (eg., age, rank, years of service, years of military retirement) of the alcoholic and non-alcoholic sub-groups of persons retired from the Air Force were compared with those outlined in the Department of Defense Statistical Report on the Military Retirement System, Fiscal Year 1989 (1990). Finally, alcoholics included in this study were compared with all of those in treatment during the study period in terms of rank, age and current military status.

2. Bivariate analysis was conducted to assess relationships among independent variables. Based on the theoretical and empirical data noted previously, the strength and direction of the relationships among variables was explored using appropriate measures of association. Zero-order correlations for interval-level variables included in this study are presented in Appendix X. Tests of significance were calculated, and scatterplots were examined to determine if in fact the relationship could best be described in linear terms. Differences between groups (eg., alcoholic versus non-alcoholic, active duty versus retired) on key resource variables, such as health, esteem, mastery, and various instrumental and expressive measures of social support, as well as the six coping response factors were explored using the two-sample t-test. This was seen as an initial step in testing hypotheses that alcoholics and those for whom the

retirement context had been more negative would have fewer resources on which to draw in coping with stressful situations (hypotheses #1 - #5).

3. The least squares method for fitting linear regression models, the REG procedure in the SAS system for data analysis (SAS Institute Inc., 1987, p. 773-876), was used to assess the relationship between multiple qualitative (eg., alcoholism, rank, race, education, marital status, military status, control over the decision to retire, employment status, etc.) and quantitative (eg., age, length of active duty service, length of retirement from the military) variables, key intrapersonal and interpersonal resource measures (eg., health, esteem, mastery, and social support), and the dependent coping variables. Results of this step in the analysis were aimed at addressing hypotheses concerning the impact of variations in treatment status (alcoholic versus non-alcoholic) and the context of retirement on coping resources and responses, controlling for other variables likely to impact on the levels of resources available (hypotheses #4 and #5).

4. Hierarchical multiple regression was used as the final step in the analytical process in order to explore the significance of interactions between the key study variables (alcoholism and context of retirement factors) and intrapersonal/interpersonal resources in explaining

variability among the five coping response factors. Its use was predicated in large part on the flexibility of this analytical procedure and empirical findings previously noted which suggested the existence of interactive effects among independent variables. Cohen and Cohen (1983, p. 120) have stressed what might be termed a "building block" approach in conducting hierarchical multiple regression, sequentially adding independent variables in a predetermined, theory-driven order, assessing changes in the proportion of explained variance with the addition of each new variable. Judd and Kenny (1981, p. 98 and p. 185), however, hold an opposing point of view which advocates as an initial step the testing of an equation which regresses the dependent variable on all theoretically defined independent variables and includes the highest order of interaction theoretically justified. Starting with the highest level interaction terms, models are tested and non-significant terms deleted in a sequential manner, so that each model tested is based on the results of previous regression runs. Interpretation is based on partial regression coefficients rather than on the additional variance explained as in the procedure emphasized by Cohen and Cohen (1983, p. 120). The ordering of independent variables is based on theoretical considerations concerning temporal or causal relationships. It was this latter approach which was employed in analyzing data for this study, and the results of this process were used to assess the impact of alcoholism and

the context of retirement on coping responses in managing stressful situations (hypotheses #1 - #5).

## CHAPTER IV

### RESULTS

#### Characteristics of the Sample

As indicated earlier, a total of 478 subjects were ultimately included in this study and the analysis reflects their responses to items incorporated in the questionnaire. As a first step in the analysis process, and in order to assess the validity of subsequent inferences about the population studied, characteristics of subjects currently serving on active duty and those retired from the military were contrasted with each other and with known characteristics of the populations from which they were drawn.

#### Comparison of Active Duty Sub-Samples with Total Air Force:

The sub-samples of those serving on active duty with the Air Force included 211 males drawn at random from among all those in the enlisted grades, Airman First Class (E-3) through Chief Master Sergeant (E-9), serving on active duty in May 1989. The first two enlisted grades were not included in this study since these reflect individuals who are generally in their initial training sequence and are rarely afforded an opportunity for treatment if an alcohol use problem is

identified. A second sub-sample was comprised of 164 males who participated in treatment at one of the seven Air Force Alcoholism Rehabilitation Centers (ARCs) in the United States. Table 4.1 contrasts these two groups with the Air Force population as a whole as of September 1989 (Air Force Magazine, 1990). While 63.1% of the total Air Force and 62.1% of non-alcoholic subjects serving on active duty had at least some college, only 42.1% of alcoholic subjects had more than a high school diploma. Both the study sub-samples reflected larger concentrations of individuals in enlisted grades E-5 through E-7 than were found in the Air Force as a whole, and the average age of those on active duty who participated in the study was somewhat older (31 years) than that of the total Air Force population (28 years). In part, these differences in rank structure and age may be attributed to the absence of junior enlisted members (enlisted grades E-1 and E-2) in the study sample. Racial composition of alcoholics and non-alcoholics in the study who were serving on active duty appear very similar to that of the Air Force as a whole.

#### Comparison of Study Subjects with All Air Force Retirees:

Table 4.2 contrasts alcoholic and non-alcoholic study participants with all those listed as retired from the Air Force in 1989 (Department of Defense, 1990). Substantial differences are reflected in the rank structure for the study

TABLE 4.1

**Comparison of Study Participants Serving on Active Duty  
with All Those Serving in the Air Force in 1989**

	<u>Total Air Force</u>	<u>Non-Alcoholic Sub-Sample</u>	<u>Alcoholic Sub-Sample</u>
<b>Education:</b>			
High School	171,022 (36.95%)	80 (37.91%)	95 (57.93%)
1-2 Years College	236,001 (50.99%)	93 (44.08%)	53 (32.32%)
3-4 Years College	54,330 (11.74%)	28 (13.27%)	15 (9.14%)
Graduate School	1,478 (0.32%)	10 (4.74%)	1 (0.61%)
<b>Rank:</b>			
E-1	16,129 (3.48%)	0	0
E-2	26,242 (5.67%)	0	0
E-3	67,480 (14.58%)	12 (5.69%)	14 (8.54%)
E-4	130,893 (28.28%)	39 (18.48%)	32 (19.51%)
E-5	111,395 (24.07%)	71 (33.65%)	46 (28.05%)
E-6	57,617 (12.45%)	35 (16.59%)	42 (25.61%)
E-7	39,218 (8.47%)	39 (18.48%)	23 (14.02%)
E-8	9,231 (2.00%)	8 (3.79%)	6 (3.66%)
E-9	4,626 (1.00%)	7 (3.32%)	1 (0.61%)
<b>Totals:</b>	<b>462,831</b>	<b>211</b>	<b>164</b>

TABLE 4.1 (Continued)

Comparison of Study Participants Serving on Active Duty  
with All Those Serving on Active Duty in 1989

	<u>Total Air Force</u>	<u>Non-Alcoholic Sub-Sample</u>	<u>Alcoholic Sub-Sample</u>
<b>Average Age:</b>	28 Years	31 Years	31 Years
<b>Race:</b>			
White	362,692 (78.36%)	170 (80.57%)	127 (77.44%)
Black	80,783 (17.45%)	27 (12.80%)	25 (15.24%)
Other	19,356 (4.18%)	14 (6.64%)	12 (7.32%)
<b>Totals:</b>	462,831	211	164

TABLE 4.2

Comparison of Retired Study Participants with All  
Those Listed as Retired from the Air Force in 1989

	<u>Total Retired</u>	<u>Non-Alcoholic Sub-Sample</u>	<u>Alcoholic Sub-Sample</u>
<b>Years of Military Service:</b>	21.8	23.0	22.1
<b>Years of Military Retirement:</b>	14.2	14.3	11.0
<b>Age:</b>	55.8	55.9	50.3
<b>Rank:</b>			
E-1	118 (0.03%)	0	0
E-2	376 (0.10%)	0	0
E-3	1454 (0.40%)	0	1 (3.57%)
E-4	4456 (1.22%)	1 (1.33%)	0
E-5	40,852 (11.18%)	0	0
E-6	111,137 (30.43%)	21 (28.00%)	11 (39.29%)
E-7	139,558 (38.21%)	38 (50.67%)	11 (39.29%)
E-8	41,339 (11.32%)	14 (18.67%)	4 (14.28%)
E-9	25,971 (7.11%)	1 (1.33%)	1 (3.57%)
<b>Totals:</b>	365,261	75	28

sub-samples and the totals of all those retired from the Air Force. 97.4% of non-alcoholics and 92.8% of the alcoholics who were retired from the Air Force and included in this study were concentrated in enlisted grades E-6 through E-8, while only 80% of all those retired from the Air Force fell into those three grades. Differences are also indicated on measures of age and years of military retirement. While non-alcoholic subjects retired from the Air Force were very similar to the totals of all those retired in terms of age (55.9 and 55.8 years, respectively) and years of military retirement (14.3 and 14.2 years, respectively), the average age of the alcoholic sample of those retired was only 50.3 years and average years of military retirement was only 11.0 years. Years of military service was comparable for all three groups.

#### Comparison of Sub-Sample Characteristics:

Characteristics of alcoholic and non-alcoholic subjects were examined along a number of dimensions based on their military status (currently serving on active duty or retired from the Air Force).

1. Age - Table 4.3 reflects age differences among the four groups included in this study. While alcoholics and non-alcoholics serving on active duty are similar in average age,

**TABLE 4.3**  
**Average Age of Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
Age (yrs):	30.9	31	55.9	50.3
Range	(20-56)	(20-45)	(41-75)	(38-61)
Totals:	164	211	27	74
DF	373		99	
T	-0.08		3.26	
Prob > T	0.94		0.00*	
	* significant at the 0.05 level			

they are substantially younger than those who have retired from the military. There is also a notable age difference between alcoholics and non-alcoholics who are retired from the Air Force (chi-square= 3.26 df= 99 p= 0.00 n= 101).

2. Years of Active Duty - While there are understandable differences in length of active duty between those retired from the military and those still on active duty, Table 4.4 indicates that differences between alcoholics and non-alcoholics are minimal.

3. Educational Level - Significant differences are identifiable in the educational backgrounds of the study participants. As Table 4.5 indicates, while only 42.1% of active duty alcoholics in the sample had more than a high school diploma, 62.1% of non-alcoholics had completed some education (chi-square= 17.93 df= 3 p= 0.00 n= 375). Conversely, only 53.4% of non-alcoholic subjects retired from the military had more than a high school diploma as compared to 78.6% of retired alcoholics (chi-square= 8.57 df= 3 p= 0.04 n= 103). Differences between alcoholics and non-alcoholics were most noticeable at the graduate level.

4. Marital Status - Table 4.6 reflects the marital status of subjects involved in this study and suggests significant differences in experience based on both level of alcohol use and military status. The most notable distinction centers on the numbers of those divorced or separated. 28.1% of alcoholics on active duty and 37% of alcoholics who were

**TABLE 4.4**  
**Average Years of Active Duty for Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Years of Active Duty:</b>	12.1	12.2	22.1	23.0
<b>Range</b>	(1-28)	(2-31)	(6-31)	(20-36)
<b>Totals:</b>	164	211	28	75
<b>DF</b>	373		101	
<b>T</b>	0.18		1.19	
<b>Prob &gt; T</b>	0.86		0.24	

TABLE 4.5

## Highest Grade Completed in School by Study Participants

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Highest Grade:	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
High School	95 (57.9%)	80 (37.9%)	6 (21.4%)	35 (46.6%)
2 Yrs College	53 (32.3%)	93 (44.1%)	18 (64.3%)	26 (34.7%)
4 Yrs College	15 (9.2%)	28 (13.3%)	4 (14.3%)	11 (14.7%)
Graduate School	1 (.6%)	10 (4.7%)	0	3 (4.0%)
Totals:	164	211	28	75
		375		103
DF		3		3
			3	
Chi-Square	17.93		1.77	8.57
Prob	0.00*		0.62	0.04*

---

\* significant at the 0.05 level

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**TABLE 4.6**  
**Marital Status of Study Participants**

Marital Status:	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
Married	81 (49.4%)	156 (73.9%)	17 (63.0%)	66 (89.1%)
Widowed	1 (0.6%)	1 (0.5%)	0	1 (1.4%)
Divorced	36 (22.0%)	11 (5.2%)	6 (22.2%)	6 (8.1%)
Separated	10 (6.1%)	7 (3.3%)	4 (14.8%)	0
Never Married	36 (21.9%)	36 (17.1%)	0	1 (1.4%)
<b>Totals:</b>	164	211	27#	74#
		375		101
<b>DF</b>		4		4
			4	
<b>Chi-Square</b>	32.18		21.82	16.67
<b>Prob</b>	0.00*		0.00*	0.00*

\* significant at the 0.05 level

# one missing value

retired from the military were divorced, while only 8.5% of non-alcoholic active duty persons and 9.5% of non-alcoholics who were retired from the military fell into these categories. Understandably, there was a sharp distinction between those on active duty and those who were retired in terms of the percentage of people who had never been married.

5. Race - Table 4.7 suggests that, the racial composition of the sample is generally consistent across sub-groups. However, among those who were retired, over 93% of the non-alcoholics were white, compared with only 78% of the alcoholics and a similar percentage of all those on active duty.

6. Religion - As indicated in Table 4.8, religious composition across the various sample sub-groups is generally similar, with the exception of those alcoholics who were retired from the military ( $\chi^2 = 9.25$   $df = 2$   $p = 0.01$   $n = 101$ ). Within this group, only 37.0% of the subjects were Protestant, as compared with 55.0% to 70.3% of other sub-groups. This group also had a disproportionately large percentage (44.5%) of Catholics and others (includes those who identified no religion).

7. Income - Income distribution as reflected in Table 4.9 is generally consistent for alcoholics and non-alcoholics within each of the two military status sub-groups. However, as would be expected, there are identifiable differences between those on active duty and those who retired from the

**TABLE 4.7**  
**Racial Composition of Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Race:</b>				
White	127 (77.9%)	170 (80.6%)	21 (77.8%)	69 (93.2%)
Black	25 (15.3%)	27 (12.8%)	4 (14.8%)	4 (5.4%)
Other	11 (6.7%)	14 (6.6%)	2 (7.4%)	1 (1.4%)
<b>Totals:</b>	163#	211	27#	74#
	374		101	
<b>DF</b>	2		2	
		2		
<b>Chi-Square</b>	0.51		5.18	
		5.03		
<b>Prob</b>	0.78		0.08	
		0.08		
# one missing value				

**TABLE 4.8**  
**Religious Composition of Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Religion:</b>				
Protestant	108 (65.9%)	116 (55.0%)	10 (37.0%)	52 (70.3%)
Catholic	36 (21.9%)	58 (27.5%)	12 (44.5%)	15 (20.3%)
Other	20 (12.2%)	37 (17.5%)	5 (18.5%)	7 (9.4%)
<b>Totals:</b>	164	211	27#	74#
		375		101
<b>DF</b>		2		2
			2	
<b>Chi-Square</b>	4.69			9.25
			0.73	
<b>Prob</b>	0.10			0.01*
			0.70	

\* significant at the 0.05 level  
 # one missing value

**TABLE 4.9**  
**Income Characteristics of Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Income:</b>				
Under	11	11	1	1
\$10000	(6.7%)	(5.2%)	(3.7%)	(1.3%)
\$10000-	37	43	3	5
\$14999	(22.7%)	(20.4%)	(11.1%)	(6.8%)
\$15000-	36	44	2	4
\$19999	(22.1%)	(20.9%)	(7.4%)	(5.4%)
\$20000-	37	47	3	7
\$24999	(22.7%)	(22.3%)	(11.1%)	(9.5%)
\$25000-	23	29	4	12
\$29999	(14.1%)	(13.8%)	(14.8%)	(16.2%)
\$30000-	4	15	2	8
\$34999	(2.5%)	(7.1%)	(7.4%)	(10.8%)
\$35000-	4	9	4	10
\$39999	(2.5%)	(4.3%)	(14.8%)	(13.5%)
\$40000-	3	6	3	7
\$44999	(1.8%)	(2.8%)	(11.1%)	(9.5%)

**TABLE 4.9 (Continued)**  
**Income Characteristics of Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Income:</b>				
\$45000-	4	0	1	8
\$49999	(2.5%)		(3.7%)	(10.8%)
\$50000-	0	3	3	5
\$54999		(1.4%)	(11.1%)	(6.8%)
\$55000-	2	2	0	1
\$59999	(1.2%)	(0.9%)		(1.3%)
\$60000 +	2	2	1	6
	(1.2%)	(0.9%)	(3.7%)	(8.1%)
<b>Totals:</b>	163#	211	27#	74#
		374		101
<b>DF</b>		11	11	11
			11	
<b>Chi-Square</b>		13.49	103.57	4.06
<b>Prob</b>		0.26	0.00*	0.97

\* significant at the 0.05 level  
 # one missing value

military (chi-square= 103.57 df= 11 p= 0.00 n= 475). Those on active duty were more heavily represented in income levels below \$25,000. Those retired from the Air Force were more concentrated in income levels above \$25,000.

8. Number of Dependents - As would be expected, Table 4.10 indicates that there are fewer people dependent on the family income of those retired from the military than on those who remain on active duty (chi-square= 66.69 df= 4 p= 0.00 n= 475). This is consistent with their older age and the increased likelihood that children have reached maturity. However, the alcoholic sub-group of those retired from the military has proportionately a larger number of people dependent on their family income than their non-alcoholic counterparts (chi-square= 19.23 df= 4 p=0.00 n= 101). This may in part be attributed to their somewhat younger age (50.3 years versus 55.9 years).

9. Length of time at Present Address - There were substantial differences between those on active duty and those retired from the Air Force in terms of the length of time they had resided at their present address (chi-square= 123.68 df= 6 p= 0.00 n= 476). As Table 4.11 indicates, 42.9% of alcoholics and 45.0% of non-alcoholics on active duty had lived in their current residence for less than one year. Among those retired from the military, 21.5% of alcoholics compared to only 5.5% of non-alcoholics had moved that recently. While alcoholics retired from the Air Force

**TABLE 4.10**  
**Number of People Dependent on the Family Income**  
**of Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Number of People Dependent on Income:</b>				
One	49 (30.1%)	41 (19.5%)	7 (25.9%)	3 (4.1%)
Two	25 (15.3%)	37 (17.5%)	6 (22.2%)	46 (62.2%)
Three	35 (21.5%)	41 (19.4%)	11 (40.8%)	15 (20.3%)
Four	37 (22.7%)	65 (30.8%)	1 (3.7%)	5 (6.7%)
Five or more	17 (10.4%)	27 (12.8%)	2 (7.4%)	5 (6.7%)
<b>Totals:</b>	163#	211	27#	74#
		374		101
<b>DF</b>		4		4
			4	
<b>Chi-Square</b>	7.43		66.69	19.23
<b>Prob</b>	0.12		0.00*	0.00*
			0.00*	

\* significant at the 0.05 level  
 # one missing value

TABLE 4.11

**Length of Time at Present Residence  
for Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Length of Time at Present Residence:</b>				
3 Months or Less	17 (10.4%)	20 (9.5%)	1 (3.6%)	1 (1.4%)
4-6 Months	21 (12.9%)	22 (10.4%)	4 (14.3%)	2 (2.7%)
7-9 Months	15 (9.2%)	22 (10.4%)	0	1 (1.4%)
10-12 Months	17 (10.4%)	31 (14.7%)	1 (3.6%)	0
1-2 Years	33 (20.3%)	35 (16.6%)	4 (14.3%)	7 (9.4%)
2-3 Years	32 (19.6%)	45 (21.3%)	3 (10.7%)	4 (5.4%)
3+ Years	28 (17.2%)	36 (17.1%)	15 (53.5%)	59 (79.7%)
<b>Totals:</b>	163#	211	28	74#
	374		102	
<b>DF</b>	6		6	
			6	
<b>Chi-Square</b>	2.81		11.35	
			123.68	
<b>Prob</b>	0.83		0.08	
			0.00*	

\* significant at the 0.05 level  
# one missing value

displayed less residential stability than their non-alcoholic counterparts, they were much less mobile than either of the sub-groups currently serving on active duty.

10. Number of job changes - Table 4.12 reflects the number of job changes subjects of this study had experienced over the past five years. As with the length of time at their current residence, the most striking differences existed between those who remained on active duty and those who were retired from the Air Force (chi-square= 121.38 df= 5 p= 0.00 n= 375). Among those who were retired, 60.7% of alcoholics and 78.4% of non-alcoholics had no more than one job change over the preceding five year period. However, among those on active duty, 66.4% of alcoholics and 73.2% of non-alcoholics had two or more job changes during that same period and, within this group, differences were significant (chi-square= 11.61 df= 5 p= 0.04 n= 373). Among the retired, alcoholics appeared to experience more job mobility than did their non-alcoholic peers, however, the difference was not significant.

11. Number of Residence Changes in the Past Five Years - An additional measure of mobility evolved around the number of residence changes experienced by study participants over the five year period prior to the study. As Table 4.13 indicates, primary differences existed between those who were retired and those who remained on active duty (chi-square= 168.40 df=5 p= 0.00 n= 475). However, within each grouping, alcoholics experienced somewhat more residential

**TABLE 4.12**  
**Number of Job Changes for Study Participants**  
**in the Past Five Years**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Number of Job Changes:</b>				
None	24 (14.7%)	13 (6.2%)	11 (39.3%)	49 (66.2%)
One	31 (18.9%)	43 (20.6%)	6 (21.4%)	9 (12.2%)
Two	34 (20.7%)	58 (27.8%)	6 (21.4%)	7 (9.4%)
Three	42 (25.6%)	52 (24.9%)	4 (14.3%)	5 (6.8%)
Four	22 (13.4%)	20 (9.6%)	0	2 (2.7%)
Five +	11 (6.7%)	23 (10.9%)	1 (3.6%)	2 (2.7%)
<b>Totals:</b>	164	209##	28	74#
		373		102
<b>DF</b>		5	5	5
<b>Chi-Square</b>	11.61		121.38	8.09
<b>Prob</b>	0.04*		0.00*	0.15

\* significant at the 0.05 level

# one missing value

## two missing values

TABLE 4.13

**Number of Residence Changes During the Past Five Years  
for Study Participants**

Number of Residence Changes:	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
None	12 (7.4%)	19 (9.0%)	14 (50.0%)	52 (70.3%)
Once	23 (14.2%)	36 (17.1%)	4 (14.3%)	13 (17.6%)
Twice	23 (14.2%)	35 (16.6%)	5 (17.9%)	2 (2.7%)
Three	38 (23.5%)	42 (19.9%)	2 (7.1%)	6 (8.1%)
Four	29 (17.9%)	36 (17.1%)	1 (3.6%)	1 (1.3%)
Four+	37 (22.8%)	43 (20.3%)	2 (7.1%)	0
Totals:	162##	211	28	74#
	373			102
DF	5		5	5
Chi-Square	1.93		168.40	14.04
Prob	0.86		0.00*	0.02*

\* significant at the 0.05 level

# one missing value

## two missing values

mobility than did their non-alcoholic counterparts. Among those retired from the military significant differences were found, with 35.7% of alcoholics moving two or more times as compared to only 12.1% of non-alcoholics. Among those on active duty, 78.4% of alcoholics and 73.9% of non-alcoholics had moved two or more times.

To summarize, major distinctions between sub-groups in this sample were predictable. Those who were retired from the military were older, had more years of active duty service, a higher income, fewer people dependent on their family income, had lived at their present address longer and had experienced fewer job and residence changes than their active duty counterparts. Similarly, alcoholics in this sample were less well educated and more likely to have experienced marital difficulties than non-alcoholics. However, among those who were retired, alcoholics were notably younger, reflected greater racial and religious diversity, had more people dependent on their family income, and displayed greater job and residential mobility.

#### Retirement Characteristics of Alcoholics and Non-Alcoholics:

A number of variables related to the context of retirement were included in this study in order to determine if they influenced levels of available resources or specific efforts to cope with stressful situations. Responses of

alcoholics and non-alcoholics in the sample were examined to assess differences.

1. Retirement Decision - Those retired from the military were asked to define the basis for their decision to retire. Table 4.14 indicates that approximately two thirds of all respondents felt that their decision to retire had not been a voluntary one. However, there appeared to be only minimal differences between alcoholics and non-alcoholics.

2. Timing of Retirement in Relation to Peers - Table 4.14 also indicates that slightly more alcoholics (33.3%) than non-alcoholics (20.5%) felt that their retirement from the military occurred earlier than it did for others who joined the military at the same time they did. Conversely, a larger proportion of non-alcoholics felt their retirement had occurred later than it did for their peers. Differences, however, were not significant.

3. Timing of Retirement in Relation to Personal Plans - As Table 4.14 reflects, 42.9% of alcoholics and 47.3% of non-alcoholics felt their retirement had occurred earlier than they had planned. Very few people in either group perceived that retirement had come later than planned. Differences between the two groups were negligible.

4. Attendance at Retirement Classes - Table 4.15 indicates that two-thirds of alcoholics and non-alcoholics reported attending some type of retirement briefing or class

TABLE 4.14

## Retirement Characteristics of Study Participants

Retirement Decision:	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
Involuntary	18 (64.3%)	54 (72.0%)
Voluntary	10 (35.7%)	21 (28.0%)
<b>Totals:</b>	28	75

Chi-Square= 0.58 DF= 1 P= 0.49

## Timing of Retirement:

## In Relation to Peers

Earlier	9 (33.3%)	15 (20.5%)
Same Time	13 (48.2%)	37 (50.7%)
Later	5 (18.5%)	21 (28.8%)
<b>Totals:</b>	27#	73##

Chi-Square= 2.16 DF= 2 P= 0.34

## In Relation to Planning

Earlier	12 (42.9%)	35 (47.3%)
Same Time	12 (42.9%)	33 (44.6%)
Later	4 (14.2%)	6 (8.1%)
<b>Totals:</b>	28	74#

Chi-Square= 0.89 DF= 2 P= 0.64

# one missing value

## two missing values

TABLE 4.15

## Retirement Characteristics of Study Participants

	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Retirement Classes Attended:</b>		
No	10 (35.7%)	28 (37.8%)
Yes	18 (64.3%)	46 (62.2%)
<b>Totals:</b>	<b>28</b>	<b>74#</b>
Chi-Square= 0.04    DF= 1    P= 0.84		
<b>Planning Before Retirement:</b>		
Length of Planning		
3 Months or Less	3 (10.7%)	9 (12.2%)
4-6 Months	5 (17.9%)	14 (18.9%)
7-9 Months	3 (10.7%)	7 (9.5%)
10-12 Months	5 (17.9%)	12 (16.2%)
1-2 Years	6 (21.4%)	12 (16.2%)
2-3 Years	3 (10.7%)	10 (13.5%)
3+ Years	3 (10.7%)	10 (13.5%)
<b>Totals:</b>	<b>28</b>	<b>74#</b>
Chi-Square= 0.68    DF= 6    P= 0.99 # one missing value		

**TABLE 4.15 (Continued)**  
**Retirement Characteristics of Study Participants**

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	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Employment Status:</b>		
Full Time	15 (55.6%)	39 (52.0%)
Part Time	5 (18.5%)	11 (14.7%)
Unemployed	2 (7.4%)	0
Fully Retired	2 (7.4%)	20 (26.7%)
In School	2 (7.4%)	0
Disabled	1 (3.7%)	5 (6.7%)
<b>Totals:</b>	<b>27#</b>	<b>75</b>

Chi-Square= 15.06    DF= 5    P= 0.01

# one missing value

---

at which benefits and/or the retirement experience were discussed. There was no significant difference between alcoholics and non-alcoholics on this issue.

5. Length of Planning Before Retirement - As is noted in Table 4.15, a majority of subjects in this study began planning for their retirement less than a year before they made the transition. 57.2% of alcoholics and 56.8% of non-alcoholics fell into this group. Again, however, there were no differences between the two groups.

6. Employment Status - Table 4.15 indicates that similar proportions of alcoholics and non-alcoholics were working full or part time. However, larger percentages of alcoholics listed themselves as unemployed (7.4%) and in school (7.4%), while more non-alcoholics were fully retired (26.7%) or disabled (6.7%). Differences between groups were found to be significant ( $\chi^2 = 15.06$   $df = 5$   $p = 0.01$   $n = 102$ ) and may in part be explained by the age difference between the two groups.

In summary, significant differences between alcoholics and non-alcoholics were noted on only one measure related to the context of retirement. Non-alcoholics were more likely to be fully retired or disabled than alcoholics.

#### Characteristics of the Stressful Event:

As indicated previously, a number of studies have

demonstrated that coping responses vary depending on characteristics of the stressful situations confronted. The context within which the event occurs, the severity of the event and perceptions of control over the event all come into play in defining individual responses. In order to explore this issue, a number of these variables were include in this study and there appeared to be real differences between alcoholics and non-alcoholics in these areas.

1. Perceived Control over the Event - As Table 4.16 indicates, a larger percentage of alcoholics identified situations over which they felt they could exercise control than did non-alcoholics. Differences between alcoholics and non-alcoholics were more pronounced than were differences between those on active duty and those retired from the military.

2. Context in which the Stressful Event Occurred - Participants in this study identified a broad range of situations (Table 4.16). However, almost 3/4 (74.3%) of all stressful situations identified occurred in the job/career or family/home setting. Larger proportions of non-alcoholics did identify financial (11.2%) or health/medical (13.3%) situations than did alcoholics (4.7% and 5.7%, respectively), though. Differences were most significant among those on active duty (chi-square= 16.19 df= 6 p= 0.01 n=375) and between active duty and retired respondents (chi-square= 26.91

**TABLE 4.16**  
**Characteristics of Stressful Events Identified**  
**by Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Perceived Control Over Event:</b>				
No Control	72 (43.9%)	114 (54.0%)	10 (35.7%)	47 (62.7%)
Control	92 (56.1%)	97 (46.0%)	18 (64.3%)	28 (37.3%)
<b>Totals:</b>	164	211	28	75
	375		103	
<b>DF</b>	1		1	
			1	
<b>Chi-Square</b>	3.79		5.99	
			1.07	
<b>Prob</b>	0.05*		0.01*	
			0.30	

\* significant at the 0.05 level

**TABLE 4.16 (Continued)**  
**Characteristics of Stressful Events Identified**  
**by Study Participants**

<b>Event Category:</b>	<b>ACTIVE DUTY</b>		<b>RETIRED</b>	
	<b><u>Alcoholic</u></b>	<b><u>Non-Alcoholic</u></b>	<b><u>Alcoholic</u></b>	<b><u>Non-Alcoholic</u></b>
Job/Career	80 (48.8%)	103 (48.8%)	12 (42.9%)	25 (33.3%)
Financial	8 (4.9%)	23 (10.9%)	1 (3.6%)	9 (12.0%)
Social/ Community	15 (9.1%)	7 (3.3%)	1 (3.6%)	4 (5.3%)
Family/ Home	49 (29.9%)	59 (28.0%)	10 (35.7%)	17 (22.7%)
Health/ Medical	7 (4.3%)	18 (8.5%)	4 (14.3%)	20 (26.7%)
Spiritual	3 (1.8%)	1 (0.5%)	0	0
Other	2 (1.2%)	0	0	0
<b>Totals:</b>	164 (34.3%)	211 (44.1%)	28 (5.9%)	75 (15.7%)
	375		103	
<b>DF</b>	6		6	
		6		
<b>Chi-Square</b>	16.19		4.80	
		26.91		
<b>Prob</b>	0.01*		0.31	
		0.00*		

**TABLE 4.16 (Continued)**  
**Characteristics of Stressful Events Identified**  
**by Study Participants**

	ACTIVE DUTY		RETIRED	
	<u>Alcoholic</u>	<u>Non-Alcoholic</u>	<u>Alcoholic</u>	<u>Non-Alcoholic</u>
<b>Severity of Event:</b>				
Not Stressful				
1	3 (1.8%)	2 (0.9%)	0	2 (2.7%)
2	1 (0.6%)	11 (5.2%)	0	5 (6.7%)
3	12 (7.3%)	39 (18.5%)	1 (3.6%)	16 (21.3%)
4	38 (23.2%)	82 (38.9%)	10 (35.7%)	25 (33.3%)
5	110 (67.1%)	77 (36.5%)	17 (60.7%)	27 (36.0%)
Very Stressful				
<b>Totals:</b>	164 (34.3%)	211 (44.1%)	28 (5.9%)	75 (15.7%)
	375		103	
<b>DF</b>	4		4	
<b>Chi-Square</b>	39.51		9.46	
			2.26	
<b>Prob</b>	0.00*		0.05*	
			0.69	

df= 6 p= 0.00 n= 478).

3. Severity of the Event - Very few of those responding identified stressful events which could be characterized as mild or moderate. When asked to assess the severity of the event described, 80.8% of the respondents rated the event described as "4" or "5" on a 5-point scale, with "5" being very stressful. However, among alcoholics, 67.1% of those on active duty and 60.7% of those retired from the military rated their situations as very stressful, compared to only 36.5% and 36.0%, respectively, of their non-alcoholic counterparts.

Taken as a whole, it would appear that alcoholics tended to identify situations which were perceived as being more in their control and somewhat more stressful than did non-alcoholics. Differences were also noted by event category, but among all sub-groups respondents most frequently identified stressful situations related to job or family. As might have been expected, a greater percentage of those retired from the military identified health or medical events than did those on active duty.

#### Relationships among Variables

A number of significant, and generally predictable, relationships were found among variables included in this study.

### Relationships among Socio-demographic Variables:

1. Rank - Initial thoughts had been that rank might well serve as a summary indicator of socio-economic status and, in fact, rank was found to be significantly related to both income (chi-square = 445.673 df = 88  $p > .000$  n = 475) and educational level (chi-square = 70.433 df = 24  $p > .000$  n = 478). However, when examined in relation to military status (serving on active duty or retired from the military), it was found that these associations were significant only among those on active duty. For those retired from the military, prior rank conveyed little concerning educational and income levels at the time of the survey.

2. Race - Table 4.17 indicates that race and income in this sample were closely associated (chi-square = 37.414 df = 22  $p = 0.021$  n = 474). The primary distinction between the sub-groups centers on the concentration of "Other" racial groups in the income range below \$25,000 (85.6%, as opposed to 60.3% for whites and 58.3% for blacks). Income levels for blacks and whites in this sample appear comparable. However, examination of the rank of study participants (Table 4.18) suggests that whites are disproportionately represented at the top of the rank structure, while 50% of those falling in the category labeled as "Other" are found in the lowest two enlisted grades sampled. The largest concentration of both blacks and whites (84.9% and 69.8%, respectively) appears at

TABLE 4.17

**Relationship Between Race and Income  
Among Study Participants**

	<u>White</u>	<u>Black</u>	<u>Other</u>	<u>Total</u>
<b>Income:</b>				
Under \$10,000	16 (4.1%)	2 (3.3%)	6 (21.4%)	24 (5.1%)
\$10,000-\$14,999	72 (18.7%)	7 (11.7%)	9 (32.1%)	88 (18.6%)
\$15,000-\$19,999	65 (16.8%)	15 (25.0%)	6 (21.4%)	(1     )
\$20,000-\$24,999	80 (20.7%)	11 (18.3%)	3 (10.7%)	94 (19.8%)
\$25,000-\$29,999	56 (14.5%)	10 (16.7%)	2 (7.1%)	68 (14.3%)
\$30,000-\$34,999	23 (6.0%)	5 (8.3%)	1 (3.6%)	29 (6.1%)
\$35,000-\$39,999	25 (6.5%)	1 (1.7%)	1 (3.6%)	27 (5.7%)
\$40,000-\$44,999	16 (4.2%)	3 (5.0%)	0	19 (4.0%)
\$45,000-\$49,999	12 (3.1%)	1 (1.7%)	0	13 (2.7%)
\$50,000-\$54,999	9 (2.3%)	2 (3.3%)	0	11 (2.3%)
\$55,000-\$59,999	2 (0.5%)	2 (3.3%)	0	4 (0.8%)
\$60,000 +	10 (2.6%)	1 (1.7%)	0	11 (2.3%)
<b>Totals:</b>	386	60	28	474#

# four missing values

chi-square= 37.414 df= 22 p= 0.021 n= 474

**TABLE 4.18**  
**Relationship Between Race and Rank**  
**Among Study Participants**

	<u>White</u>	<u>Black</u>	<u>Other</u>	<u>Total</u>
<b>Rank:</b>				
E-3	23 (5.9%)	1 (1.7%)	3 (10.7%)	27 (5.7%)
E-4	55 (14.2%)	6 (10.0%)	11 (39.3%)	72 (15.2%)
E-5	92 (23.8%)	20 (33.3%)	5 (17.9%)	117 (24.6%)
E-6	88 (22.7%)	17 (28.3%)	3 (10.7%)	108 (22.7%)
E-7	90 (23.3%)	14 (23.3%)	6 (21.4%)	110 (23.2%)
E-8	29 (7.5%)	2 (3.3%)	0	31 (6.5%)
E-9	10 (2.6%)	0	0	10 (0.2%)
<b>Totals:</b>	387	60	28	475#

# three missing values  
chi-square= 25.751 df= 12 p= 0.012 n= 475

the middle three grades.

3. Religion - The largest proportion of people in this study were either Protestant (60.2%) or Catholic (25.5%), but a sizeable number of people (12.0%) indicated "none" when asked to site their religious preference. Only 11 people (2.3% of the sample) identified with other religions. A significant association was found between religion and income (chi-square= 88.51 df= 44 p= 0.00 n= 475). Among the larger sub-groups, Protestants and Catholics were similarly distributed across the income range. However, only 14.0% of those who identified no religious preference earned more than \$25,000, while 41.6% of Protestants and 39.7% of Catholics fell into this category.

4. Marital Status - Table 4.19 clearly indicates the significant relationship between income and marital status (chi-square= 182.296 df= 44 p= 0.000 n= 475). As would be expected, the largest proportion of those who had never been married (87.5%) were at the lower end of the income scale, earning less than \$20,000. In contrast, 32.1% of those who were married at the time of the survey earned over \$30,000. While the difference between these two groups might well reflect a difference in age and, hence, differing levels of occupational experience, only 14.4% of respondents who were separated or divorced earned more than \$30,000 a year. Table 4.20 presents a similar picture, with 87.7% of those who had never been married falling in the three lowest ranks included

TABLE 4.19

**Relationship Between Income and Marital Status  
Among Study Participants**

	<u>Married</u>	<u>Separated/ Divorced</u>	<u>Never Married</u>	<u>Total</u>
<b>Income:</b>				
Under \$10,000	5 (1.6%)	1 (1.2%)	18 (25.0%)	24 (5.1%)
\$10,000-\$14,999	34 (10.6%)	21 (25.0%)	33 (45.83%)	88 (18.5%)
\$15,000-\$19,999	54 (16.9%)	20 (24.1%)	12 (16.7%)	86 (18.1%)
\$20,000-\$24,999	69 (21.6%)	19 (22.9%)	6 (8.3%)	94 (19.8%)
\$25,000-\$29,999	55 (17.2%)	10 (12.1%)	3 (4.2%)	68 (14.3%)
\$30,000-\$34,999	26 (8.1%)	3 (3.6%)	0	29 (6.1%)
\$35,000-\$39,999	26 (8.1%)	1 (1.2%)	0	27 (5.7%)
\$40,000-\$44,999	17 (5.3%)	2 (2.4%)	0	19 (4.0%)
\$45,000-\$49,999	11 (3.4%)	2 (2.4%)	0	13 (2.7%)
\$50,000-\$54,999	11 (3.4%)	0	0	11 (2.3%)
\$55,000-\$59,999	5 (1.6%)	0	0	5 (1.1%)
\$60,000 +	7 (2.2%)	4 (4.8%)	0	11 (2.3%)
<b>Totals:</b>	<b>320</b>	<b>83</b>	<b>72</b>	<b>475#</b>

# three missing values  
Chi-Square= 182.296 df= 44 p= 0.000 n= 475

**TABLE 4.20**  
**Relationship between Rank and Marital Status**  
**Among Study Participants**

---

	<u>Married</u>	<u>Separated/ Divorced</u>	<u>Never Married</u>	<u>Total</u>
<b>Rank:</b>				
E-3	6 (1.9%)	1 (1.2%)	20 (27.4%)	27 (5.7%)
E-4	27 (8.4%)	17 (20.5%)	28 (38.4%)	72 (15.1%)
E-5	79 (24.7%)	22 (26.5%)	16 (21.9%)	117 (24.6%)
E-6	82 (25.6%)	20 (24.1%)	7 (9.6%)	109 (22.9%)
E-7	92 (28.8%)	16 (19.3%)	2 (2.7%)	110 (23.1%)
E-8	25 (7.8%)	6 (7.2%)	0	31 (6.5%)
E-9	9 (2.8%)	1 (1.2%)	0	10 (2.1%)
<b>Totals:</b>	320	83	73	476#

---

# two missing values  
 Chi-Square= 152.764 df= 24 p= 0.000 n= 476

---

in this study. While the distinction is less pronounced between those who were married and those who were divorced or separated, those who were married were still more prominent among the three highest enlisted ranks (39.4%) than those who were separated or divorced (27.7%).

#### Relationships among Context of Retirement Variables:

As with the socio-demographic variables noted above, an effort was made to explore relationships among variables addressing the context of retirement and a number of these were found to be significantly associated.

1. Decision for Retirement - Table 4.21 indicates that individual perceptions concerning the timing of retirement were related to the nature of the retirement decision. Among those whose retirement was involuntary, 55.6% retired earlier than planned and only 9.7% retired later. For those who retired voluntarily, 76.7% retired at the same time or later than they had planned.

2. Length of Planning Before Retirement - As was expected, those who retired earlier than planned reported a shorter period of planning prior to retirement than did those who retired at about the same time or later than they had planned (Table 4.22). 44.7% of those who retired earlier than planned had less than six months to plan for that event and

**TABLE 4.21**  
**The Relationship Between the Reasons for Retirement**  
**and the Timing of Retirement**

---

	Reasons for Retirement		
	<u>Involuntary</u>	<u>Voluntary</u>	<u>Total</u>
<b>Timing of Retirement</b> <b>in Relation to Planning:</b>			
Earlier	40 (55.6%)	7 (23.3%)	47 (46.1%)
Same Time	25 (34.7%)	20 (66.7%)	45 (44.1%)
Later	7 (9.7%)	3 (10.0%)	10 (9.8%)
<b>Totals:</b>	72 (70.6%)	30 (29.4%)	102#

---

# one missing value

chi-square= 9.671 df= 2 p= 0.008 n= 102

---

TABLE 4.22

**Relationship Between the Timing of Retirement  
Decision and the Length of Planning Before Retirement**

---

<b>Length of Planning</b>	<b>Timing of Retirement in Relation to Planning</b>			
	<u>Earlier</u>	<u>Same Time</u>	<u>Later</u>	<u>Total</u>
3 Months or Less	10 (21.3%)	2 (4.4%)	0	12 (11.8%)
4-6 Months	11 (23.4%)	8 (17.8%)	0	19 (18.6%)
7-9 Months	7 (14.9%)	1 (2.2%)	2 (20.0%)	10 (9.8%)
10-12 Months	7 (14.9%)	8 (17.8%)	2 (20.0%)	17 (16.7%)
1-2 Years	6 (12.8%)	9 (20.0%)	3 (30.0%)	18 (17.6%)
2-3 Years	3 (6.4%)	8 (17.8%)	2 (20.0%)	14 (13.7%)
3+ Years	3 (6.4%)	9 (20.0%)	1 (10.0%)	13 (12.7%)
<b>Totals:</b>	47 (46.1%)	45 (44.1%)	10 (9.8%)	102#

---

# one missing value

chi-square= 22.276   df= 12   p= 0.035   n= 102

---

74.5% began their planning within the year prior to retirement. Among those retiring as planned, 57.8% began planning for retirement more than a year before the event, and for those retiring later than planned, 60% indicated they had more than a year to prepare.

3. Employment Status - A relationship was also noted between current employment status and timing of retirement in relation to peers (Table 4.23). Among those who perceived their retirement as having occurred earlier than their peers, 62.5% were fully employed at the time of the survey. Among those who felt their retirement came later only 38.5% were fully employed. Similarly, 42.3% of those who felt they retired later than their peers were fully retired, while only 12.5% of those who perceived their retirement as coming earlier fell into that category.

4. Timing of Retirement -As Table 4.24 indicates, a relationship was also found between timing of retirement in relation to peers and timing of retirement in relation to planning ( $\chi^2 = 10.634$   $df = 4$   $p = 0.031$   $n = 100$ ). Among those who felt they retired earlier than their peers, 95.8% indicated they had retired earlier or at the same time as they had planned. 90% of those for whom retirement came at the same time as their peers felt they retired earlier or at the same time as they had planned. Finally, of those retiring later than their peers, 84.6% felt their retirement came earlier or at the same time as planned.

**TABLE 4.23**  
**Timing of Retirement in Relation to**  
**Current Employment Status**

---

<b>Timing of Retirement in Relation to Peers</b>				
	<u>Earlier</u>	<u>Same Time</u>	<u>Later</u>	<u>Total</u>
<b>Employment Status</b>				
Full Time	15 (62.5%)	28 (57.1%)	10 (38.5%)	53 (53.5%)
Part Time	2 (8.3%)	9 (18.4%)	5 (19.2%)	16 (16.2%)
Unemployed	2 (8.3%)	0	0	2 (2.0%)
Fully Retired	3 (12.5%)	6 (12.2%)	11 (42.3%)	20 (20.2%)
In School	1 (4.2%)	1 (2.0%)	0	2 (2.0%)
Disabled	1 (4.2%)	5 (10.2%)	0	6 (6.1%)
<b>Totals:</b>	24 (24.2%)	49 (49.5%)	26 (26.3%)	99#

---

# four missing values

chi-square= 21.750   df= 10   p= 0.016   n= 99

---

TABLE 4.24

Relationship Between Timing of Retirement in Relation to  
Peers and Timing of Retirement in Relation to Planning

Timing of Retirement in Relation to Planning				
	<u>Earlier</u>	<u>Same Time</u>	<u>Later</u>	<u>Total</u>
Timing of Retirement in Relation to Peers				
Earlier	11 (24.4%)	12 (26.7%)	1 (10.0%)	24 (24.0%)
Same Time	17 (37.8%)	28 (62.2%)	5 (50.0%)	50 (50.0%)
Later	17 (37.8%)	5 (11.1%)	4 (40.0%)	26 (26.0%)
Totals:	45 (45.0%)	45 (45.0%)	10 (10.0%)	100#

# three missing values

chi-square= 10.634 df= 4 p= 0.031 n= 100

---

## Relationships among Variables Characterizing the Stressful Event:

A number of significant relationships existed between variables which defined the stressful event. These variables include the context of the event, the severity of the event, perceptions concerning control over the event and the length of time since the event occurred.

1. Length of Time since the Event Occurred - Table 4.25 reflects the fact that, for the total group, the largest percentage of events occurred 1-4 weeks or 21-24 weeks prior to completion of the survey (58.8%). However, for those rating the severity of the event described as low (ratings of "1", "2", or "3" on a 5-point scale, with "5" being very stressful) or medium ("4" on the 5-point scale), over 60% of respondents identified events which had occurred within the two months before completing the questionnaire. Among those who described an event which they rated as highly stressful ("5" on the 5-point scale), 55.9% identified events which had occurred over three months prior to survey completion.

2. Context of the Event - While somewhat weak, there also was found to be a relationship between the severity of the event and the context within which the event occurred (Table 4.26). The largest two event categories, job/career and family/home, accounted for 74.2% of all the stressful events

TABLE 4.25

Relationship Between the Severity of the Event  
and the Length of Time Since the Event Occurred

---

Length of Time Since Event	Severity of the Event			<u>Total</u>
	<u>Low</u>	<u>Medium</u>	<u>High</u>	
1-4 Weeks	33 (35.9%)	72 (46.5%)	55 (23.8%)	160 (33.5%)
5-8 Weeks	24 (26.1%)	21 (13.5%)	25 (10.8%)	70 (14.6%)
9-12 Weeks	13 (14.1%)	17 (11.0%)	22 (9.5%)	52 (10.9%)
13-16 Weeks	7 (7.6%)	15 (9.7%)	23 (10.0%)	45 (9.4%)
17-20 Weeks	2 (2.2%)	5 (3.2%)	23 (10.0%)	30 (6.3%)
21-24 Weeks	13 (14.1%)	25 (16.1%)	83 (35.9%)	121 (25.3%)
<b>Totals:</b>	92 (19.3%)	155 (32.4%)	231 (48.3%)	478

---

chi-square= 56.494 df= 10 p= 0.000 n= 478

---

TABLE 4.26

**Relationship Between the Severity of the Event  
and the Context Within Which the Event Occurred**

---

<b>Event Category</b>	<b>Severity of the Event</b>			<b><u>Total</u></b>
	<b><u>Low</u></b>	<b><u>Medium</u></b>	<b><u>High</u></b>	
Job/Career	35 (38.0%)	87 (56.1%)	98 (42.4%)	220 (46.0%)
Family/Home	25 (27.2%)	37 (23.9%)	73 (31.6%)	135 (28.2%)
Health/ Medical	11 (12.0%)	9 (5.8%)	29 (12.6%)	49 (10.3%)
Financial	11 (12.0%)	14 (9.0%)	16 (6.9%)	41 (8.6%)
Social/ Community	9 (9.8%)	4 (2.6%)	14 (6.1%)	27 (5.6%)
Other	1 (1.1%)	4 (2.6%)	1 (0.4%)	6 (1.3%)
<b>Totals:</b>	92 (19.3%)	155 (32.4%)	231 (48.33%)	478

---

chi-square= 12.284    df= 4    p= 0.015    n= 478

---

described. 84.1% of events threatening the job were rated as moderately or highly stressful ("4" or "5" on the 5-point scale). For those threatening the family, the comparable figure was 80.3%. Events related to health, finances and social standing were rated as moderately or highly stressful by 77.6%, 73.2% and 66.7%, respectively, of those identifying such events.

Impact of Military Status and Level of Alcohol Use  
on Resource and Coping Variables

As an initial step in assessing the impact of military status and alcoholism on resources available in meeting the demands of stressful situations and on coping responses themselves, the two-sample t-test was employed. Table 4.27 presents results which suggest that both level of alcohol use and military status significantly influenced the resources available for coping with stress (hypotheses #4 and #5). While significant differences were found for all resources, military status was clearly a key factor in relation to the resource variables of health, money and demands. It also appeared to be a factor defining differences on the social support variable of autonomy.

As was predicted, those on active duty at the time of this survey had a more positive perception of their health than did those who were retired from the military. Those

TABLE 4.27

Means and Standard Deviations for Resource  
Variables by Military Status and Level of Alcohol Use

<u>Resource</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>t</u>	<u>p</u>
<b>Health</b>	10.16	1.83	478		
Active Duty	10.36	1.62	375		
Alcoholic	10.37	1.81	164		
Non-Alcoholic	10.36	1.46	211	-0.37	.97
Retired	9.43	2.29	103	-3.89	.00
Alcoholic	9.17	1.88	28		
Non-Alcoholic	9.52	2.42	75	0.67	.50
<b>Esteem</b>	32.94	4.61	470		
Active Duty	32.95	4.67	370		
Alcoholic	31.09	4.85	164		
Non-Alcoholic	34.44	3.96	206	7.15	.00
Retired	32.87	4.40	100	-0.17	.87
Alcoholic	30.61	4.45	28		
Non-Alcoholic	33.75	4.07	72	3.37	.00
<b>Mastery</b>	22.22	3.30	470		
Active Duty	22.33	3.33	370		
Alcoholic	21.39	3.32	164		
Non-Alcoholic	23.09	3.15	206	5.07	.00
Retired	21.80	3.18	100	-1.42	.15
Alcoholic	20.29	2.75	28		
Non-Alcoholic	22.39	3.16	72	3.09	.00

**TABLE 4.27 (Continued)**  
**Means and Standard Deviations for Resource**  
**Variables by Military Status and Level of Alcohol Use**

<u>Resource</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>t</u>	<u>p</u>
<b>Social Supports:</b>					
<b>Intimate Relations</b>	0.00	1.00	474		
Active Duty	-0.03	1.00	372		
Alcoholic	-0.33	0.99	162		
Non-Alcoholic	0.21	0.94	210	5.28	.00
Retired	0.09	1.01	102	1.06	.29
Alcoholic	-0.41	1.04	28		
Non-Alcoholic	0.28	0.94	74	3.25	.00
<b>Autonomy</b>	0.00	1.00	474		
Active Duty	-0.05	0.97	372		
Alcoholic	-0.24	1.01	162		
Non-Alcoholic	0.10	0.92	210	3.44	.00
Retired	0.17	1.09	102	1.95	.05
Alcoholic	-0.36	1.04	28		
Non-Alcoholic	0.37	1.04	74	3.18	.00
<b>Money</b>	0.00	1.00	474		
Active Duty	-0.09	0.98	372		
Alcoholic	-0.20	1.03	162		
Non-Alcoholic	0.00	0.93	210	1.91	.06
Retired	0.32	1.03	102	3.67	.00
Alcoholic	0.20	0.99	28		
Non-Alcoholic	0.36	1.04	74	0.69	.49

TABLE 4.27 (Continued)

Means and Standard Deviations for Resource  
Variables by Military Status and Level of Alcohol Use

<u>Resource</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>t</u>	<u>p</u>
<b>Demands</b>	0.00	1.00	474		
Active Duty	-0.10	0.94	372		
Alcoholic	-0.01	0.94	162		
Non-Alcoholic	-0.17	0.93	210	-1.59	.11
Retired	0.37	1.13	102	3.86	.00
Alcoholic	0.34	1.19	28		
Non-Alcoholic	0.38	1.12	74	0.16	.87
<b>Family</b>	0.00	1.00	474		
Active Duty	0.03	1.03	372		
Alcoholic	-0.18	1.12	162		
Non-Alcoholic	0.19	0.92	210	3.44	.00
Retired	-0.11	0.90	102	-1.21	.23
Alcoholic	-0.41	0.97	28		
Non-Alcoholic	0.01	0.85	74	2.10	.04

retired from the military also reflected a greater sense of autonomy on the job, fewer problems in meeting financial demands and a greater level of comfort in meeting the demands imposed upon them than did those on active duty. This would seem consistent with the increased age of those retired from the military and the commensurate increase in financial and career maturity.

Significant differences in all other resource variables were associated with differences in the level of alcohol use. Both active duty and retired non-alcoholics demonstrated a more positive self-attitude on the Rosenberg Self-Esteem Scale than did alcoholics, and also perceived a greater degree of personal control over events influencing their lives. In addition, non-alcoholics reported greater satisfaction in their intimate relationships, more autonomy on the job, and fewer family problems.

A similar process was used in examining differences between sub-groups in terms of coping responses used in managing identified stressful situations. Table 4.28 contrasts scores of alcoholics and non-alcoholics serving on active duty and retired from the military on each of the five coping factors (Hypotheses #1, #2 and #3). Clear differences between alcoholics and non-alcoholics were noted on the first two of these factors, wishful thinking and growth-oriented coping. Alcoholics in this study made greater use of wishful thinking coping responses and were more likely to identify

TABLE 4.28

Means and Standard Deviations for Ways of Coping  
Factors by Military Status and Level of Alcohol Use

<u>Factor</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>t</u>	<u>p</u>
<b>Wishful</b>	0.00	1.00	478		
Active Duty	0.02	1.00	375		
Alcoholic	0.44	1.08	164		
Non-Alcoholic	-0.32	0.79	211	-7.53	.00
Retired	-0.06	1.00	103	-0.64	.52
Alcoholic	0.48	1.09	28		
Non-Alcoholic	-0.26	0.90	75	-3.49	.00
<b>Growth</b>	0.00	1.00	478		
Active Duty	0.02	1.00	375		
Alcoholic	0.52	1.11	164		
Non-Alcoholic	-0.37	0.70	211	-8.90	.00
Retired	-0.07	0.99	103	-0.81	.42
Alcoholic	0.59	1.30	28		
Non-Alcoholic	-0.32	0.72	75	-3.48	.00
<b>Active</b>	0.00	1.00	478		
Active Duty	0.02	0.97	375		
Alcoholic	-0.05	0.91	164		
Non-Alcoholic	0.07	1.00	211	1.20	.23
Retired	-0.07	1.12	103	-0.71	.47
Alcoholic	0.01	0.89	28		
Non-Alcoholic	-0.10	1.20	75	-0.43	.66

TABLE 4.28 (Continued)

Means and Standard Deviations for Ways of Coping  
Factors by Military Status and Level of Alcohol Use

<u>Factor</u>	<u>Mean</u>	<u>SD</u>	<u>N</u>	<u>t</u>	<u>p</u>
<b>Social</b>	0.00	1.00	478		
Active Duty	0.04	1.01	375		
Alcoholic	0.09	1.07	164		
Non-Alcoholic	-0.01	0.95	211	-0.95	.34
Retired	-0.13	0.98	103	-1.51	.13
Alcoholic	0.27	1.02	28		
Non-Alcoholic	-0.28	0.92	75	-2.60	.01
<b>Cognitive</b>	0.00	1.00	478		
Active Duty	-0.08	0.96	375		
Alcoholic	-0.18	1.07	164		
Non-Alcoholic	-0.01	0.85	211	1.79	.07
Retired	0.29	1.10	103	3.40	.00
Alcoholic	0.00	1.10	28		
Non-Alcoholic	0.40	1.08	75	1.65	.10

growth-oriented mechanisms as a part of the process of coping with identified stressful situations than were non-alcoholics. Although distinctions were less clear-cut, alcoholics among those retired from the military were more likely to seek social support in managing stressful situations than were non-alcoholics. When coping responses were examined in terms of military status, the only significant difference in coping responses was noted in the use of cognitive coping mechanisms. Those retired from the military were more likely to employ what might be viewed as cognitive restructuring mechanisms in responding to stressful situations than were those on active duty. Interestingly, no significant differences were noted among alcoholics and non-alcoholics in their use of active coping mechanisms or among those on active duty in their tendency to seek out social supports in managing stress.

#### Fitting the Regression Model

As indicated previously, the least squares method for fitting linear regression models was used to examine the impact of socio-demographic, context of retirement, resource and stress variables in defining variability in the coping factors identified in the Ways of Coping Checklist. A complete listing of all independent variables entered into the equations can be found at Appendix IX.

Following procedures outlined by Gujarati (1978, p. 287-

311) and Achen (1982, p. 33), dummy variables were constructed and introduced into the regression equation to assess the influence of different levels of categorical variables on the dependent measures. Because of the interest in assessing the influence of retirement variables, separate models for each of the coping factors were examined for those remaining on active duty and those retired from the military.

The STEPWISE method of model selection was used with a .10 level of significance required for retention of variables in the model. It has been noted (Berry and Feldman, 1987) that problems in fitting the model can evolve when independent variables are highly correlated. This can complicate the results of significance tests on which decisions regarding variable entry and retention are made. In order to minimize this problem, zero-order correlations for interval level study variables were carefully examined (see Appendix X). A strong correlation was found between esteem and mastery (.70). In addition, age was highly correlated with such variables as years of active duty (.86) and years of retirement (.79). As a result, age was not entered into the regression equations. The measure of stability was also deleted for similar reasons. Separate equations were run for esteem and mastery, with essentially the same results. Their relationship to other independent variables and with the dependent measures, as well as their explanatory value in model selection was comparable. As a result, only regression results employing esteem are

reported below. Residual plots and studentized residuals were examined but a decision was made to retain outliers since their removal did not substantially improve the explanatory power of the models and caused distributions to deviate from normal. The following tables present the results of the regression procedures:

1. Wishful Thinking - As noted previously, this factor appeared to reflect a tendency to avoid stressful circumstances through flights of fantasy or daydreams of rescue and, as such, could be termed an emotion-focused coping mechanism. Table 4.29 indicates that, for both those on active duty and those retired from the military, intrapersonal and interpersonal resources were significantly related to use of this type of coping response. Self-esteem, satisfaction in intimate relations and a sense of autonomy in interaction with others were negatively associated with wishful thinking. Among those on active duty, an absence of money problems was also related to decreased use of these coping responses. Conversely, increased use of wishful thinking as a coping mechanism was associated with perceptions of greater severity in the identified stressful situation. However, while alcoholism and variables defining the nature of the stressful situation were related to increased use of wishful thinking among those on active duty, these were not significant components for those retired from the military. The

TABLE 4.29

**Stepwise Regression of "Wishful Thinking" Coping  
On Socio-Demographic, Resource and Context of  
Stressful Situation Variables for Sample Participants**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>WISHFUL</b>							
Active Duty	364	.44	22.7***				
Other Races				0.354125	0.162	0.089080	2.19**
1-2 Years of College				-0.243424	0.082	-0.120749	-2.96***
Divorced				-0.226182	0.114	-0.087825	-1.99**
Alcoholic				0.279820	0.093	0.140915	3.00***
Esteem				-0.036483	0.010	-0.171747	-3.53***
Intimate				-0.208736	0.046	-0.212222	-4.56***
Autonomy				-0.169251	0.046	-0.165607	-3.70***
Money				-0.146041	0.042	-0.145053	-3.46***
When				0.012810	0.005	0.115591	2.64***
Job Stress				-0.210781	0.080	-0.106818	-2.64***
No Control				0.182343	0.080	0.092524	2.29**
High Stress				0.356247	0.089	0.180776	4.01***
 Retired 96 .57 19.6***							
Other Races				-0.916274	0.406	-0.158345	-2.26**
2-4 Years of College				-0.431826	0.200	-0.151484	-2.16**
Esteem				-0.055369	0.019	-0.243313	-2.92***
Intimate				-0.373087	0.073	-0.373202	-5.12***
Autonomy				-0.192301	0.076	-0.210360	-2.54**
High Stress				0.558938	0.147	0.276455	3.80***

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations. Only those variables found to contribute significantly in explaining variability in the dependent variable are identified above.)

\*  $p \leq .10$ \*\*  $p \leq .05$ \*\*\*  $p \leq .01$

coefficient of determination for those on active duty (.44) and those retired from the military (.57) would suggest a moderately good fit of these models to the data.

2. Growth-Oriented Coping - This factor identified coping responses which were characterized by the creative potential, beneficial qualities or opportunities for increased personal growth inherent in the stressful event. While Table 4.30 reflects that the coefficients of determination were smaller than for wishful thinking (.31 for those on active duty and .32 for those retired from the military), they still suggest a moderately good fit for the regression model. For both groups, alcoholism was the variable most closely associated with an increased use of this coping mechanism. An absence of perceived problems on instrumental social support factors (limitations in autonomy, money concerns and external demands) was also related to increased emphasis on growth-oriented coping responses by those on active duty, but only external demands was significant for those who were retired from the military. For both groups, higher education was positively associated and perceived absence of control over the stressful event was negatively associated with variation in use of this coping mechanism. Interestingly, those who believed that their retirement was involuntary were less likely to use growth-oriented coping responses.

3. Active Coping - Active coping responses included those items suggesting direct efforts to confront and overcome the

TABLE 4.30

**Stepwise Regression of Growth-Oriented Coping on  
Socio-Demographic, Resource and Context of Stressful  
Situation Variables for Sample Participants**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>GROWTH</b>							
Active Duty	364	.31	19.9***				
1-2 Years of College				0.270352	0.092	0.131559	2.94***
Alcoholic				0.844533	0.096	0.417224	8.78***
Autonomy				0.084160	0.047	0.080785	1.77*
Money				0.087443	0.046	0.085202	1.90*
Demands				0.096576	0.049	0.088482	1.98**
When				0.011864	0.005	0.105019	2.27**
Stress Within Home				-0.251256	0.098	-0.114185	-2.56**
No Control				-0.458358	0.090	-0.228162	-5.10***
Retired 96 .32 7.2***							
1-2 Years of College				0.334127	0.185	0.165422	1.81*
Catholic				-0.355171	0.202	-0.157670	-1.76*
Retired				-0.483244	0.191	-0.223852	-2.53**
Involuntarily							
Alcoholic				0.692005	0.216	0.310840	3.21***
Demands				0.153570	0.077	0.174080	1.99**
No Control				-0.445462	0.183	-0.222931	-2.43***

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations. Only those variables found to contribute significantly in explaining variability in the dependent variable are identified above.)

\*  $p \leq .10$ \*\*  $p \leq .05$ \*\*\*  $p \leq .01$

stressful event. Table 4.31 indicates that, among active duty members of the study sample, higher education and esteem were positively associated with increased use of active coping responses, while work-related stress or stress evolving as a result of medical problems were related to decreased use of active coping options. However, the very low coefficient of determination (.08) would suggest that the independent variables identified were not adequate in explaining variability in use of these coping responses. A much better fit of the regression model (.48) can be seen for those retired from the military. Retirement variables, including retiring later than planned and planning in advance of retirement, were positively related to increased use of active coping responses in confronting stressful situations. Similarly, being black, better educated and having greater self-esteem, as well as work/financial stress and perceptions that the stressful situation was of greater severity coincided with increased use of active coping responses. However, being divorced, having more dependents and fewer external demands were associated with decreased use of active coping responses.

4. Seeks Social Support - This factor included coping responses which tapped the individual's willingness to draw on the support of others in managing stressful situations. Again, for active duty study participants, variables entered into the model appear to have only limited explanatory value (Table 4.32). Neither intrapersonal nor interpersonal

TABLE 4.31

**Stepwise Regression of Active Coping on  
Socio-Demographic, Resource and Context of Stressful  
Situation Variables for Sample Participants**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>ACTIVE</b>							
Active Duty	364	.08	7.4***				
3-4 Years of College				0.412113	0.156	0.135066	2.64***
Esteem				0.042910	0.011	0.206580	4.05***
Job Stress				-0.182457	0.102	-0.094558	-1.79*
Medical Stress				-0.501194	0.201	-0.131395	-2.50**
<b>Retired</b>							
Retired	96	.48	7.2***				
Black				0.852701	0.336	0.208020	2.54**
1-2 Years of College				0.663584	0.189	0.290703	3.52***
Divorced				-0.518145	0.273	-0.174698	-1.90*
Number of Dependents				-0.231125	0.087	-0.229986	-2.65***
Retired Later than Planned				0.651870	0.303	0.175788	2.15**
Planning 7-12 Months Before Retirement				0.668091	0.207	0.265543	3.23***
Esteem				0.052057	0.021	0.203232	2.53**
Demands				-0.250183	0.089	-0.250941	-2.82***
Job Stress				0.478202	0.211	0.202344	2.26**
Financial Stress				0.663132	0.307	0.178825	2.16**
High Stress				0.715520	0.193	0.314409	3.72***

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations. Only those variables found to contribute significantly in explaining variability in the dependent variable are identified above.)

\*  $p \leq .10$ \*\*  $p \leq .05$ \*\*\*  $p \leq .01$

TABLE 4.32

**Stepwise Regression of "Seeks Social Support"  
On Socio-Demographic, Resource and Context of Stressful  
Situation Variables for Sample Participants**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>SOCIAL</b>							
Active Duty	364	.12	6.8***				
Years of Active Duty				-0.025759	0.009	-0.162093	-2.94***
Number of Dependents				0.084753	0.034	0.137249	2.50**
Job Stress				0.239536	0.111	0.119019	2.16**
Medical Stress				0.630851	0.212	0.158565	2.98***
Financial Stress				0.517778	0.192	0.143638	2.70***
Medium Stress				0.250420	0.148	0.116294	1.69*
High Stress				0.644640	0.137	0.320729	4.70***
Retired	96	.46	8.29***				
2-4 Years of College				-0.720858	0.231	-0.258222	-3.12***
Protestant				-0.414492	0.171	-0.205226	-2.43**
Jewish/Other Religion				-0.853282	0.388	-0.192314	-2.20**
Retired Earlier than Planned				-0.588904	0.159	-0.298206	-3.71***
Retired Earlier than Peers				0.608844	0.194	0.255601	3.13***
Planning 7-12 Months Before Retirement				0.468281	0.180	0.213933	2.60**
Esteem				0.048357	0.019	0.216994	2.56**
Money				-0.165032	0.080	-0.171620	-2.07**
High Stress				0.982407	0.163	0.496178	6.01***

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations. Only those variables found to contribute significantly in explaining variability in the dependent variable are identified above.)

\*  $p \leq .10$ \*\*  $p \leq .05$ \*\*\*  $p \leq .01$

resource variables were noted to be significant in explaining variance in the use of social supports as a mechanism for managing stress. The nature of the stressful event did appear to be important, with greater perceived severity and situations involving work, medical or financial stress being associated with an increased tendency to seek social support. However, the tendency to seek social supports in response to stress decreased with length of time on active duty. For those retired from the military, retirement variables appeared to play an important role in defining use of social supports. Planning in advance of retirement and retiring earlier than peers were associated with increased use of social supports as a coping response. Self esteem and increased severity of the stressful situation also predicted increased use of social supports in response to stress. However, retiring earlier than planned was related to a decrease in this coping mechanism, as was an absence of problems with money. The coefficient of determination for the active duty sub-sample was again low (.12), but was moderately high (.46) for those in the study who were retired from the military.

5. Cognitive Coping - These coping responses appear to address active efforts to reframe or redefine the event in a way which would reduce the perceived stress. Table 4.33 indicates that, among those on active duty, increased use of cognitive coping responses coincided with better health, an absence of family problems and limitations in control over the

TABLE 4.33

**Stepwise Regression of Cognitive Coping  
On Socio-Demographic, Resource and Context of  
Stressful Situation Variables for Sample Participants**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>COGNITIVE</b>							
Active Duty	364	.11	7.0***				
Black				0.329336	0.140	0.119815	2.35**
Other Races				0.506802	0.195	0.131809	2.59***
Years of Active Duty				0.027875	0.008	0.184971	3.47***
Health				0.081178	0.030	0.135684	2.68***
Family				0.170002	0.049	0.182636	3.46***
No Control				0.182185	0.096	0.095578	1.90*
Retired	96	.35	5.8***				
Graduate School				-1.202333	0.541	-0.195840	-2.22**
Married				2.499758	0.935	0.914325	2.67***
Divorced				2.181065	0.947	0.780173	2.30**
Jewish/Other Religion				1.572097	0.433	0.327048	3.63***
Intimate				0.194825	0.105	0.183687	1.85*
Family				0.287292	0.190	0.243954	2.70***
Financial Stress				-0.719580	0.307	-0.205869	-2.35**
High Stress				0.687609	0.190	0.320553	3.61***

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations. Only those variables found to contribute significantly in explaining variability in the dependent variable are identified above.)

\*  $p \leq .10$ \*\*  $p \leq .05$ \*\*\*  $p \leq .01$

stressful event. For those retired from the military, the absence of problems in intimate relations or in the family, and increased severity of the stressful event predicted greater use of cognitive coping responses. Financial stress and higher education were negatively associated with use of these coping responses. Again, the coefficient of determination was low (.11) for those on active duty, but moderately high (.35) for those retired from the military.

Clearly, in reviewing the regression models noted above, a number of features stand out. First, for each of the coping factors, there appears to be a much stronger fit of the model for those study participants who were retired from the military. This is most noticeable for active coping, seeks social support and cognitive coping responses, but holds true for wishful thinking and growth-oriented coping responses as well. Secondly, while alcoholism was an important factor defining variability in use of wishful thinking and growth-oriented coping responses, it did not significantly influence the use of active coping responses, the tendency to seek social support or to employ cognitive coping responses in managing stressful situations (Hypotheses #1 and #2). Additionally, while the intrapersonal resource of self-esteem was an important correlate to the use of both wishful thinking and active coping responses, it appeared to be of only marginal value in explaining variance in the other coping factors. Instrumental and expressive measures of the

perceived quality of available social supports demonstrated a more consistent contribution in this regard, particularly among those retired from the military. The expressive aspects of social support, addressed in terms of problems with intimacy and family functioning, appeared most important in relation to the use of wishful thinking and cognitive coping responses. Finally, context of retirement variables, particularly planning in advance of retirement and the timing of retirement in relation to personal expectations, were significant predictors of variability in the use of active and growth-oriented coping responses, as well as the tendency to seek social support (Hypotheses #3 and #5).

#### Testing for Interactions

In order to further examine the relationship among key variables and to better address hypotheses concerning the impact of alcoholism and context of retirement on coping resources and responses (hypotheses #3, #4 and #5), a final step in the analytical process involved the use of hierarchical multiple regression. As outlined by Judd and Kenny (1981, p. 97-101), dependent variables are regressed on all theoretically defined independent variables, including the highest order of interaction theoretically justified. Starting with the highest level interaction terms, models are tested and non-significant terms are dropped in a sequential

manner, so that each model tested draws on the results of previous models. Once all higher-order interactions have been tested and deleted or found to be significant, main effects are tested for those terms not included in interactions retained in the model. Those not found to be significant are removed and testing stops.

The ordering of independent variables is based on theoretical considerations concerning temporal or causal relationships. For purposes of this study, the ordering of variables (as reflected in Appendix XI) was based on a loose temporal sequence outlined by Moos and Schaefer (1993, p. 237), among others, with sets of variables being entered into the equation in the following order: 1. socio-demographic variables; 2. retirement variables; 3. alcoholism measure; 4. intrapersonal resource variable (self-esteem, mastery); 5. interpersonal resource variables (those addressing level of satisfaction with intimate relations, autonomy, money, demands on one's time and family) ; 6. variables defining the stressful situation; and 7. interaction terms. The specific ordering of variables within each set was arbitrary, but consistent throughout the analytical process. Because of the sheer number of variables in the model, only first-order interactions were examined and interactions were limited to those variables most relevant to the hypotheses of this study. These included not only the alcoholism and intrapersonal/interpersonal resource variables noted above, but also context

of retirement variables addressing the timing of retirement in relation to personal plans, timing of retirement in relation to peers, length of planning prior to retirement, and whether or not the individual perceived that retirement was involuntary. Separate equations were tested for those remaining on active duty and those retired from the military. The following tables present the results of the hierarchical multiple regression procedures:

1. Wishful Thinking - Table 4.34 reflects the fact that, as was the case in examination of the previous regression results, both intrapersonal and interpersonal resources are significantly related to use of these coping responses in confronting stressful situations. However, while differences were noted between those on active duty and those retired from the military using the STEPWISE method of model selection, there is an even greater degree of complexity and a significantly improved fit of the model for those subjects who had retired from the Air Force when the role of interactions is considered. The coefficient of determination for those on active duty increased only marginally (.44 to .45), but among military retirees it increased from .57 to .76, indicating a marked improvement in the explanatory power of this model.

While alcoholism had not been a significant contributor to variability in use of wishful thinking coping responses in the simple regression model for military retirees, it did

TABLE 4.34

**Hierarchical Multiple Regression of Wishful Thinking Coping  
on Socio-Demographic, Resource and Context of Stressful  
Situation Variables, Including First-Order Interactions of  
Alcoholism and Retirement Variables with Resource Variables**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>WISHFUL</b>							
Active Duty	365	.45	19.2***				
Other Races				0.708758	0.370	0.086838	2.15**
1-2 Years of College				-0.236162	0.082	-0.116751	-2.90***
Divorced				-0.214881	0.114	-0.083106	-1.89*
Alcoholic				0.277738	0.094	0.139514	2.95***
Esteem				-0.039006	0.010	-0.182854	-3.76***
Intimate				-0.186971	0.046	-0.189576	-4.08***
Autonomy				-0.053047	0.062	-0.051944	-0.86
Money				-0.153219	0.042	-0.151937	-3.64***
Demands				-0.121734	0.058	-0.113509	-2.09**
When				0.014652	0.005	0.131967	3.04***
Stress Within Home				0.158065	0.088	0.072954	1.79*
No Control				0.188981	0.080	0.095610	2.36**
High Stress				0.363255	0.090	0.183802	4.05***
Alcoholic X Autonomy				-0.233499	0.084	-0.158223	-2.79***
Alcoholic X Demands				0.176104	0.088	0.108930	2.01**

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations.)

\*  $p \leq .10$

\*\*  $p \leq .05$

\*\*\*  $p \leq .01$

TABLE 4.34 (Continued)

**Hierarchical Multiple Regression of Wishful Thinking Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables, Including First-Order Interactions of Alcoholism and Retirement Variables with Resource Variables**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>WISHFUL</b>							
Retired	98	.76	8.8***				
Other Races				-1.243573	0.400	-0.211338	-3.13***
1-2 Yrs of College				-0.433603	0.166	-0.211742	-2.61**
2-4 Yrs of College				-0.873918	0.217	-0.310645	-4.02***
Retired Earlier Than Planned				2.596745	1.020	1.281862	2.55**
Retired Later than Planned				-0.533582	0.226	-0.159406	-2.36**
Retired Earlier Than Peers				-0.294808	0.172	-0.119483	-1.71*
Planning 7-12 Months Before Retirement				0.626932	0.192	0.276807	3.26***
Planning 1+ Yr Before Retirement				0.249250	0.174	0.122125	1.44
Working Full Time				0.469862	0.245	0.232896	1.92*
Working Part-Time				0.679582	0.275	0.247999	2.47**
Fully Retired				0.456995	0.264	0.188355	1.73*
Alcoholic				0.206391	0.168	0.092153	1.23
Esteem				0.022444	0.026	0.097606	0.88
Intimate				-0.331146	0.091	-0.335424	-3.66***
Autonomy				-0.352481	0.082	-0.383500	-4.31***
Money				-0.162296	0.072	-0.164960	-2.26**
Demands				-0.197734	0.086	-0.223270	-2.31**
Stress Within Home				0.280996	0.147	0.124067	1.91*
No Control				0.381957	0.140	0.188860	2.72***
High Stress				0.516908	0.145	0.254010	3.56***
Alcohol X Intimate				-0.323719	0.140	-0.184971	-2.32**
Alcoholic X Money				0.374531	0.149	0.195473	2.52**
Retired Earlier than Planned X Esteem				-0.077102	0.030	-1.286036	-2.54**
Planning 7-12 Months Before Retirement X Autonomy				-0.405117	0.163	-0.184552	-2.48**
Planning 1+ Yr Before Retirement X Demands				0.221665	0.115	0.175257	1.93*
Retired Earlier than Peers X Autonomy				0.485319	0.198	0.193852	2.45**

\*  $p \leq .10$ \*\*  $p \leq .05$ \*\*\*  $p \leq .01$

appear to influence the relationship between key expressive (satisfaction with intimate relations) and instrumental (monetary resources) social support resource measures and the dependent variable. Among alcoholics, as compared to non-alcoholics, there is a more pronounced negative relationship between perceived satisfaction with intimate relations and use of wishful thinking as a mechanism for coping. As the perception of satisfaction decreases, there is an even greater impact on the use of wishful thinking to cope than would be true for the non-alcoholic. Conversely, an increase in satisfaction with instrumental (monetary) resources does not lead to as great a reduction in use of wishful thinking as it does for the non-alcoholic participants in this study.

A similar process appears in examination of the results of the hierarchical multiple regression for those on active duty with the military. For alcoholics in the study, the negative relationship between feelings of autonomy or independence and use of wishful thinking is more pronounced, suggesting that a decrease in the sense of autonomy will lead to an even greater reliance on wishful thinking for alcoholics than for non-alcoholics. With regard to the relationship between external demands and use of wishful thinking to cope, it would appear that the negative relationship is reduced for alcoholics. Decreases in perceived external demands do not lead to as pronounced a reduction in the use of wishful thinking to cope as it does with non-alcoholics.

Perhaps most striking about the results of the hierarchical multiple regression is the very significant relationship between context of retirement variables and use of wishful thinking to cope with stressful situations. In the STEPWISE regression of wishful thinking on the independent variables, context of retirement variables did not significantly contribute to explained variance. However, when interactions are examined, the context of retirement appears to be strongly related to use of this coping mechanism. The relationship between esteem and wishful thinking is more negative for those who perceive that retirement was earlier than planned, suggesting that a decrease in self-esteem will lead to an even greater use of wishful thinking for those who retired earlier than planned than it would for others. With regard to the length of planning prior to retirement, results would suggest that, for those who began to plan for retirement only 6-12 months prior to the event, the relationship between autonomy and wishful thinking is even more negative than it is for others. Increased feelings of autonomy will be associated with smaller reductions in the use of wishful thinking for this group than would be the case with others. Conversely, decreased feelings of autonomy will be related to greater increases in use of wishful thinking for this group than would be the case with others. For those with a longer period of planning prior to retirement, the relationship between external demands and wishful thinking is also

modified. Within this sample, for those with a longer period of planning prior to retirement there is a more positive relationship between satisfaction with external demands and use of wishful thinking to cope with stressful situations. Finally, it would appear that there is a more positive relationship between satisfaction with perceived level of autonomy and use of wishful thinking as a coping mechanism for those who believe they retired earlier than their peers.

2. Growth - Table 4.35 indicates that, as was the previous case, the coefficient of determination for those on active duty reflected only limited change (.31 to .33) as a result of the hierarchical multiple regression procedure for growth-oriented coping responses. However, there was also negligible change for sample participants who were retired from the Air Force. Among those on active duty, socio-demographic factors took on increased significance in relation to use of growth-oriented coping responses. Increased income was associated with increased use of these coping responses, while being married was negatively correlated with growth-oriented coping. Context of retirement variables remained important as factors contributing to explained variability in use of growth-oriented coping responses. In addition to stress within the home, financial stress was associated with reduced use of this coping mechanism among active duty participants in this study. Most notable, however, was the inclusion of the interaction between alcoholism and level of

TABLE 4.35

Hierarchical Multiple Regression of Growth-Oriented Coping on Socio-Demographic, Resource and Context of Stressful Situation Variables, Including First-Order Interactions of Alcoholism and Retirement Variables with Resource Variables

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>GROWTH</b>							
Active Duty	370	.33	15.7***				
1-2 Years of College				0.218115	0.091	0.106125	2.38**
Married				-0.256910	0.103	-0.123484	-2.49**
Medium Income				0.277886	0.110	0.136737	2.53**
High Income				0.369830	0.154	0.129895	2.40**
Alcoholic				0.795338	0.098	0.392587	8.12***
Autonomy				-0.042971	0.064	-0.041324	-0.67
When				0.010991	0.005	0.097298	2.12**
Stress Within Home				-0.314794	0.099	0.142422	-3.19***
Financial Stress				-0.299358	0.163	-0.082504	-1.83*
No Control				-0.480246	0.088	-0.239128	-5.44***
Alcoholic X Autonomy				0.226458	0.092	0.150027	-2.45**
Retired 101 .33 7.7***							
1-2 Years of College				0.311826	0.175	0.155820	1.78*
Catholic				-0.382010	0.195	-0.170043	-1.96*
Retired				-0.466080	0.184	-0.216293	-2.53**
Involuntarily							
Alcoholic				0.756320	0.204	0.340543	3.71***
Demands				0.148136	0.074	0.168355	1.99**
No Control				-0.440426	0.176	-0.221115	-2.51**

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations.)

\*  $p \leq .10$

\*\*  $p \leq .05$

\*\*\*  $p \leq .01$

autonomy, suggesting that, within this sub-sample of those on active duty with the Air Force, alcoholics are somewhat more likely to use growth-oriented coping responses regardless of their perceptions concerning the degree of autonomy they experience in their lives. Comparison of the hierarchical multiple regression with the STEPWISE regression noted previously for those retired from the Air Force indicates no change in the nature or relative importance of variables found to be significant in explaining variability in use of growth-oriented coping mechanisms.

3. Active Coping - As Table 4.36 indicates, no substantive differences were noted between the results of the STEPWISE regression and that of the hierarchical multiple regression. As noted previously, the explanatory power of the independent variables entered into the model was much greater for study participants who were retired from the military than it was for those who remained on active duty with the Air Force. Alcoholism was not found to be significantly associated with variance in the use of active coping responses in confronting stressful situations. However, among those retired from the military, retiring later than planned and planning in advance of retirement were both positively related to use of active coping mechanisms.

4. Seeks Social Support - Small, but identifiable differences were noted in the results of the hierarchical multiple regression of "seeks social support" coping compared

TABLE 4.36

Hierarchical Multiple Regression of Active Coping  
on Socio-Demographic, Resource and Context of Stressful  
Situation Variables, Including First-Order Interactions of  
Alcoholism and Retirement Variables with Resource Variables

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>ACTIVE</b>							
Active Duty	369	.08	8.1***				
3-4 Years of College				0.432937	0.152	0.144114	2.84***
Esteem				0.043866	0.010	0.212746	4.21***
Job Stress				-0.182898	0.101	-0.094917	-1.81*
Medical Stress				-0.503019	0.200	-0.131140	-2.52**
 Retired							
	96	.48	7.1***				
Black				0.852701	0.336	0.208020	2.54**
1-2 Years of College				0.663584	0.189	0.290703	3.52***
Divorced				-0.518145	0.273	-0.174698	-1.90*
Number of Dependents				-0.231125	0.087	-0.229986	-2.65***
Retired Later than Planned				0.651870	0.303	0.175788	2.15**
Planning 7-12 Months Before Retirement				0.668091	0.207	0.265543	3.23***
Esteem				0.052057	0.021	0.203232	2.53**
Demands				-0.250183	0.089	-0.250941	-2.82***
Job Stress				0.478202	0.211	0.202344	2.26**
Financial Stress				0.663132	0.307	0.178825	2.16**
High Stress				0.715520	0.193	0.314409	3.72***

(Note - See Appendix IX for a complete listing of all independent variables entered into the equations.)

\*  $p \leq .10$

\*\*  $p \leq .05$

\*\*\*  $p \leq .01$

to the STEPWISE regression addressed earlier. As can be seen from Table 4.37, these differences evolved as a result of the identification of significant interaction terms. For those on active duty, alcoholism was found to be significantly related to key instrumental measures of the level of social support available to the individual. Among alcoholics, the relationship between level of autonomy and the tendency to seek social support in response to stressful situations was even more positive than for non-alcoholics. The same was true with regard to the relationship between satisfaction with financial resources and seeking social support. It would suggest that alcoholics among the active duty sub-sample in this survey were more reliant on or willing to seek help from others regardless of the level of social resources available.

Among those retired from the Air Force, some interesting differences were noted in the results of the hierarchical multiple regression. The tendency to seek social support in response to stressful situations was reduced for those who were married or divorced, and this was also true for those who were more educated and for whom there was increased satisfaction with the available monetary resources. However, seeking social support was positively associated with satisfaction in family relations, self-esteem and alcoholism. Context of retirement variables also appeared to be significant in explaining variability in the tendency to seek social support. Retiring earlier than peers and beginning to

TABLE 4.37

**Hierarchical Multiple Regression of Seeks Social Support  
Coping on Socio-Demographic, Resource and Context of  
Stressful Situation Variables, Including First-Order  
Interactions of Alcoholism and Retirement Variables  
with Resource Variables**

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<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>SOCIAL</b>							
Active Duty	370	.13	5.0***				
Years of Active Duty				-0.026170	0.009	-0.164407	-2.94***
Number of Dependents				0.091935	0.034	0.148688	2.68***
Alcoholic				0.108617	0.109	0.053639	1.00
Autonomy				-0.112083	0.074	-0.107893	-1.52
Money				-0.025367	0.074	-0.024614	-0.34
Job Stress				0.229270	0.110	0.114151	2.08**
Medical Stress				0.592167	0.215	0.147914	2.76***
Financial Stress				0.504256	0.192	0.139036	2.62***
High Stress				0.452257	0.109	0.225305	4.16***
Alcoholic X Autonomy				0.217742	0.105	0.144675	2.07**
Alcoholic X Money				0.206915	0.103	0.140075	2.01**

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(Note - See Appendix IX for a complete listing of all independent variables entered into the equations.)

\*  $p \leq .10$

\*\*  $p \leq .05$

\*\*\*  $p \leq .01$

---



plan for retirement 7-12 months prior to the event were associated with increased reliance on the support of others in managing stressful situations. At the same time, retiring earlier than planned was related to reduced use of social supports. This was accentuated in the interaction between retiring earlier than planned and satisfaction with family relations. The tendency to draw on social supports as satisfaction with family relations increased was reduced for those who felt that they had retired earlier than planned.

5. Cognitive Coping - Table 4.38 reveals significant differences between the results of the hierarchical multiple regression and those of the STEPWISE regression discussed earlier. For study participants on active duty with the Air Force, changes in the R-square were minimal (.11 to .14) and, again, suggested limited utility in explaining variability in the dependent variable. Alcoholism did, however, play a more defined role and appeared to be particularly important in defining the relationship between use of cognitive coping mechanisms and satisfaction with expressive/instrumental social supports. While the use of cognitive coping appeared to decline as satisfaction with intimate relations increased, this effect was significantly reduced among alcoholics, suggesting a greater reliance on cognitive coping regardless of the quality of intimate relations. Similarly, alcoholics on active duty in this sample were more inclined to use cognitive coping regardless of the level of monetary resources

TABLE 4.38

Hierarchical Multiple Regression of Cognitive Coping  
on Socio-Demographic, Resource and Context of Stressful  
Situation Variables, Including First-Order Interactions of  
Alcoholism and Retirement Variables with Resource Variables

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<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>COGNITIVE</b>							
Active Duty	371	.14	5.1***				
Black				0.333157	0.139	0.120245	2.40**
Other Races				0.583485	0.190	0.153301	3.07***
Years of Active Duty				0.027308	0.008	0.180455	3.33***
Alcoholic Health				-0.070055	0.102	-0.036449	-0.69
Intimate Money				0.076373	0.030	0.129298	2.58**
Family				-0.129864	0.067	-0.135596	-1.93*
No Control				-0.057589	0.068	-0.058926	-0.84
Alcoholic X Intimate				0.152214	0.049	0.163610	3.09***
Alcoholic X Money				0.165902	0.095	0.087040	1.75*
				0.247186	0.098	0.174500	2.52**
				0.166045	0.097	0.118871	1.71*

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(Note - See Appendix IX for a complete listing of all independent variables entered into the equations.)

\*  $p \leq .10$

\*\*  $p \leq .05$

\*\*\*  $p \leq .01$

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TABLE 4.38 (Continued)

**Hierarchical Multiple Regression of Cognitive Coping  
on Socio-Demographic, resource and Context of Stressful  
Situation Variables, Including First-Order Interactions of  
Alcoholism and Retirement Variables with Resource Variables**

<u>Factor</u>	<u>DF</u>	<u>RSQ</u>	<u>F</u>	<u>Coefficient</u>	<u>Std Error</u>	<u>Std Coefficient</u>	<u>T</u>
<b>COGNITIVE</b>							
Retired	98	.61	4.9***				
Graduate School				-1.419372	0.513	-0.225493	-2.77***
Married				1.200252	0.542	0.446624	2.21**
Divorced				1.275315	0.561	0.445748	2.27**
Protestant				0.618446	0.207	0.280060	2.99***
Jewish/Other Religions				1.685119	0.433	0.341995	3.89***
Medium Income				-1.377952	0.308	-0.597293	-4.47***
High Income				-1.005942	0.306	-0.463256	-3.29***
Retired Earlier than Planned				-2.975495	1.342	-1.373103	-2.22**
Retired Earlier than Peers				-0.471148	0.218	-0.178507	-2.16**
Planning 1+ Yr Before Retirement				0.443463	0.185	0.203123	2.40**
Working Full-Time				-1.193610	0.311	-0.553078	-3.83***
Working Part-Time				-0.807208	0.355	-0.275375	-2.27**
Fully Retired				-0.630720	0.354	-0.243016	-1.78*
Alcoholic				-0.404916	0.237	-0.169010	-1.71*
Esteem				0.019176	0.237	0.077959	0.65
Intimate				0.179079	0.101	0.169571	1.77*
Autonomy				-0.250356	0.091	-0.254636	-2.75***
Money				-0.292442	0.111	-0.277869	-2.64**
Demands				-0.195530	0.091	-0.206393	-2.15**
Family				0.235408	0.101	0.195422	2.34**
When				0.025617	0.010	0.202215	2.47**
Financial Stress				-1.594303	0.324	-0.445253	-4.92***
Alcoholic X Money				0.515471	0.196	0.251498	2.64**
Retired Earlier than Planned X Esteem				0.095981	0.040	1.496590	2.39**

\* p&lt;= .10

\*\* p&lt;= .05

\*\*\* p&lt;= .01

available.

Among those retired from the military, the hierarchical multiple regression provided a substantially improved model. R-square increased from .35 to .61 and revealed a substantial role for context of retirement variables in explaining variance in the use of cognitive coping mechanisms. Both retiring earlier than planned and retiring earlier than peers were negatively associated with use of cognitive coping in managing stressful situations. This was also true for those employment categories not defined by disability or educational need. However, those with a lengthier period of planning prior to retirement did appear to rely more on cognitive coping and retiring earlier than planned did seem to have an unexpected influence on the relationship between self-esteem and cognitive coping. Those who retired earlier than planned were more likely to use cognitive coping than those who did not regardless of the level of self-esteem. Reliance on cognitive coping responses increased as measures of expressive social support (eg., satisfaction with intimate relations and with family relationships) increased. Conversely, use of cognitive coping decreased as measures of instrumental social support (eg., satisfaction with monetary resources and external demands, or the perceived degree of autonomy) increased. However, in the case of satisfaction with monetary resources, alcoholism appeared to be a factor defining the relationship with cognitive coping. Alcoholics appeared more

inclined to use cognitive coping than non-alcoholics regardless of their financial resources.

While review of the results of the hierarchical multiple regressions of the Ways of Coping factors confirms a number of the conclusions drawn previously, it also suggests a more complex set of relationships than had been identified. The introduction of interactions into the analysis served to enhance the utility of the models in explaining variance in use of wishful thinking, cognitive coping and, to a lesser extent, seeks social support among those retired from the Air Force. And while interactions appeared to have only limited impact with regard to other coping mechanisms and those in the sample serving on active duty, results provided a more extensive understanding of the relationship of both alcoholism and context of retirement variables to coping resources and responses in management of stressful situations. The importance of context of retirement variables was underscored in the significant association noted with use of all coping mechanisms examined. The inclusion of interaction terms clearly suggested the unique contribution of alcoholism and context of retirement variables as moderators in defining the relationship between intrapersonal/interpersonal resources and coping responses. Finally, while STEPWISE multiple regression focused narrowly on the important association between alcoholism and variance in use of both wishful thinking and growth-oriented coping mechanisms, hierarchical

regression exposed the more subtle relationships with cognitive and seeks social support coping.

## CHAPTER V

### SUMMARY AND CONCLUSIONS

#### Summary

The major focus of this study evolved around the impact of alcoholism and context of retirement variables in defining the cognitive and behavioral mechanisms used in coping with stressful situations. It was hypothesized that level of alcohol use would be significantly associated with both variations in personal/interpersonal resources available for coping with stress and the mechanisms used in response to stress. It was also hypothesized that context of retirement variables would correlate with variations in coping resources and responses. A more restricted range of coping responses would be found for those who were identified as alcoholic and those for whom the context of retirement was reported to be more negative (eg., perceived limitations in planning, control over the timing, involuntary retirement).

Analysis of the data from surveys completed by 192 male alcoholics treated at seven Air Force inpatient Alcoholism Rehabilitation Centers and 286 non-alcoholic males serving on active duty or retired from the Air Force revealed that alcoholism was significantly related to variations in both coping resources and responses. Both active duty and retired

alcoholics were found to have a less positive self-attitude as measured by the Rosenberg Self-Esteem Scale and perceived less control over the events impacting on their lives than their non-alcoholic counterparts. They also reported a significantly reduced level of satisfaction with intimate relationships, less autonomy on the job and more family problems. Similarly, alcoholics in this study made greater use of wishful thinking coping responses and were more likely to employ growth-oriented coping mechanisms in response to identified stressful situations. Among those retired from the military, alcoholics were also more likely to seek social support. As a group, those retired from the military had a significantly less positive perception of their health, a greater sense of autonomy, fewer money problems and perceived fewer intrusive demands on their time. They were also more likely to employ cognitive coping mechanisms in responding to stress than were those remaining on active duty with the Air Force. While being alcoholic was associated with increased use of such emotion-focused coping mechanisms as wishful thinking and growth-oriented coping, there was no significant difference between alcoholics and non-alcoholics in their use of active coping mechanisms.

Examination of regression models used to assess the relationship of socio-demographic, context of retirement, resource and stress variables to variations in use of identified coping factors indicated a substantially better fit

of the model for those retired from the Air Force than for those remaining on active duty. However, both alcoholism and context of retirement variables were significantly correlated with coping responses. As indicated above, alcoholism was associated with increased use of wishful thinking and growth-oriented coping, two mechanisms generally identified as emotion-focused. Context of retirement variables, particularly planning in advance of retirement and the timing of retirement in relation to personal expectations, were significant predictors of variability in the use of active and growth-oriented coping responses, as well as the tendency to seek social support. The more positive the retirement context (eg., a longer period of planning, retiring earlier than peers, retiring voluntarily), the greater the tendency to draw on others in coping with stress, and to employ active or growth-oriented coping responses in managing stress.

Finally, hierarchical multiple regression helped to flesh out the relationships between alcoholism and context of retirement, on the one hand, and coping resources and responses on the other. Both alcoholism and context of retirement variables served to accentuate the relationship between resources and coping responses, variously attenuating the effects of increased resources or aggravating the effect of resource limitations. Level of alcohol use served as a moderator of resource variables in relation to use of wishful thinking, growth-oriented, seeks social supports, and

cognitive coping among those on active duty. Among those who were retired from the Air Force, it helped to define the relationship between resources and use of both wishful thinking and cognitive coping in management of stressful situations. For their part, context of retirement variables interacted significantly with resource variables in use of wishful thinking, seeks social support and cognitive coping.

With regard to the specific hypotheses identified for this study, the analysis above would suggest that:

Hypothesis # 1 - While alcoholics in this sample used the broad range of coping mechanisms in managing stressful situations, alcoholism was positively related to use of wishful thinking, growth-oriented and seeks social support coping. At the same time, it was negatively associated with use of cognitive coping mechanisms. Interestingly, it was not a significant factor relative to the use of active coping responses.

Hypothesis # 2 - Despite the difficulty in labeling coping mechanisms as purely problem-focused or emotion-focused (Lazarus and Folkman, 1984, p. 319), some clear distinctions are evident between alcoholics and non-alcoholics. As was noted above, there was no significant difference between these groups in use of active coping mechanisms, those most clearly identifiable as "problem-focused". However, alcoholism was positively related to use of the "emotion-focused" coping mechanism of wishful thinking. The emotion-focused or

problem-focused nature of other coping mechanisms was less clear-cut. Alcoholics were more likely to seek social support, which embodies elements of both, than were non-alcoholics. With growth-oriented coping and cognitive coping, mechanisms which appeared to redefine the meaning of the event rather than to confront it, the picture was mixed. Alcoholics were more inclined to use growth-oriented coping responses, but less inclined to use cognitive mechanisms in confronting stressful situations.

Hypothesis # 3 - There were, in fact, logical relationships between context of retirement variables and coping mechanisms. Retiring earlier than planned was positively related to wishful thinking, as was limitations in planning prior to retirement. However, retiring later than planned and retiring earlier than peers were related to a reduction in reliance on wishful thinking. Involuntary retirement was negatively related to growth-oriented coping. Retiring later than planned and planning in advance of retirement were related to increased use of active coping mechanisms. Concerning the tendency to seek social support, increases were associated with retiring earlier than peers and planning in advance of retirement, while reduction in use was related to retiring earlier than planned. Finally, retiring earlier than planned and earlier than peers were both related to decreased use of cognitive coping. Planning in advance of retirement was associated with increased use of

cognitive coping mechanisms.

Hypothesis # 4 - Interactions reflected in the results of the hierarchical multiple regressions most closely address the hypothesis concerning the interplay between alcoholism and resources as they relate to coping responses. While results varied depending on the specific coping mechanism examined, interaction between alcoholism and expressive/instrumental measures of social support were found to be significant for those on active duty with regard to wishful thinking, growth-oriented, seeks social support and cognitive coping mechanisms. For those who had retired from the military, alcoholism significantly interacted with interpersonal resources in defining use of wishful thinking and cognitive coping.

Hypothesis # 5 - The relationship between context of retirement variables and resources in terms of the use of coping responses was also reflected in the results of the hierarchical multiple regression. Interactions involving context of retirement variables were significantly related to use of wishful thinking, seeks social support and cognitive coping mechanisms. As with alcoholism, context of retirement variables served to moderate the relationship between resources and coping responses, affecting the direction and/or strength of the association.

### Discussion

As noted earlier, this study was not intended to assess outcome, the appropriateness or efficacy of coping, but, rather, to explore the validity of assumptions concerning the impact of alcoholism and retirement from the military in defining the way in which people cope with stressful situations. The results outlined above were generally consistent with both expectations and previous research findings, however, a number of important issues bear emphasis.

1. As has been pointed out by a number of researchers in the field of stress and coping (eg., Breznitz and Goldberger, 1993, p. 5; Lazarus, 1993, p. 235; Moos and Schaefer, 1993, p. 249-250), coping responses can only be evaluated if placed in the context of personal/interpersonal resources, situational demands and psychological, physical, social or other outcomes. While it has generally been found that increased problem-focused coping is associated with enhanced physical or psychological outcomes, there is also a consensus concerning the overriding importance of flexibility in response to stressful situations (Vitaliano et al, 1990, p. 582). Too limited a range of response mechanisms restricts the individual's capacity to meet changing demands. And, as important as problem-focused coping may be, not all situations are amenable to change. Some situations must be accepted and, in such cases, emotion-focused coping mechanisms may be the

most effective (Mattlin et al, 1990, p. 103; Breznitz and Goldberger, 1993, p. 5). Consistent with previous findings (Folkman and Lazarus, 1980, p. 227; Lazarus, 1993, p. 238), individuals in this study used varying mixes of each of the identified coping response factors. In this sense, differences between sub-groups within the study sample appeared to be more differences in degree rather than kind. While, for instance, alcoholism was associated with increased use of wishful thinking (an emotion-focused coping mechanism), there was no significant difference between alcoholics and non-alcoholics in their use of active coping responses. Similarly, while retirement from the military was positively correlated with use of cognitive coping responses (a mechanism designed to change the meaning of the event rather than altering the event itself), there were no significant differences between those retired from and those remaining on active duty in use of other coping mechanisms. Given primary emphasis on factors influencing the use of various coping mechanisms, the practical effect of the identified differences cannot be determined.

2. Both personal and interpersonal resources were important in defining responses to stressful situations, however, there appeared to be considerable variability depending on the specific coping response mechanism examined. As with previous studies (Holahan and Moos, 1987, p. 951; Moos and Schaefer, 1993, p. 246), an increased sense of self-esteem

was associated with increased use of active coping mechanisms and limitations in self-esteem were related to increased use of emotion-focused coping mechanisms such as wishful thinking. Among those retired from the military, esteem was positively related to the tendency to seek social support and to use cognitive coping in response to stressful situations. There was a similar pattern in the relationship between coping and instrumental/expressive social supports. Perceived satisfaction with instrumental and expressive measures of social support was most closely related to the coping mechanisms of wishful thinking and cognitive coping. These measures were unrelated to growth-oriented or active coping. While, in general, this study reinforces the value of personal and interpersonal resources in defining coping decisions, it also suggests that these resources are most closely tied to emotion-focused coping mechanisms such as wishful thinking, cognitive coping and, to a lesser extent, seeking social support.

3. Examination of the results of this study, as reflected in the hierarchical multiple regression tables, clearly suggests a more pervasive influence on coping responses as a result of factors which define the stressful situation. Situational factors were significant sources of variance in use of each of the coping mechanisms identified in this study. This is consistent with observations by others that coping may be more affected by characteristics of the

stressor than by characteristics of the person (Holahan and Moos, 1987, p. 947; Mattlin et al, 1990).

While Mattlin et al (1990, p. 110) found no relationship between severity of the stressor and coping responses, results of this study suggest that increased severity of the stressful situation is associated with increased use of wishful thinking, the tendency to seek social support and, among those retired from the military, cognitive coping. Similarly, the absence of perceived control over the stressful event is associated with increased use of wishful thinking, decreased use of growth-oriented coping, and, among those on active duty with the military, increased use of cognitive coping. Comparable findings have been reported by Vitaliano et al (1990, p. 583), Patterson et al (1990, p. 155), and Lazarus (1993, p. 239).

While coping responses were clearly correlated with the type of stressful situation encountered, the pattern varied depending on whether the sub-group under examination was retired from or remained on active duty with the military. The sole exception centered on stress in the home, which was associated with increased use of wishful thinking for both sub-groups. For those on active duty, job, financial and medical stressors were related to an increased tendency to seek social support. Job stress also led to decreased use of active coping for this group. Among those retired from the Air Force, job and financial stress were correlated with

increased use of active coping responses. These results are compatible with those of other studies (eg., Mattlin et al, 1990; Patterson et al, 1990) and serve to underscore the importance of considering both resources and situational factors in examining the nature of coping responses.

4. Results of the current study tend to support contentions that alcoholics as a group experience some restriction in personal and interpersonal resources and that differences in resources are associated with variation in use of some coping mechanisms. This would seem particularly important considering the fact that the sub-sample of alcoholics included in this study was drawn from among those completing a four-week period of inpatient alcoholism rehabilitation and that surveys were completed at least thirty days following discharge from treatment. Restriction in resources then appears to be a persistent problem for at least some alcoholics and one that may well have significant implications for the post-discharge recovery experience. It is also important to note once again, however, that differences in coping were limited to the emotion-focused mechanisms of wishful thinking, growth and to a lesser extent, cognitive coping. Active coping and the tendency to seek social support were unrelated or only marginally related to alcoholism. Despite differences in coping resources and responses between alcoholics and non-alcoholics, there was also marked variation among individuals within each sub-group,

a factor underscoring the heterogeneous nature of this population and the difficulty in defining broad generalizations.

5. Marked differences between those on active duty and those retired from the Air Force were noted in terms of both coping resources and responses. Within this sample, health was the only resource which was substantially lower for those who were retired from the military than for those on active duty. Those who were retired from the military enjoyed a greater degree of occupational and residential stability, a greater sense of autonomy on the job, fewer money problems and fewer excessive demands. In terms of esteem, mastery, intimate relations and family problems, there were no significant intergroup differences. These findings bring into question persistent assumptions concerning the negative impact of retirement from the military.

With regard to coping responses, a number of researchers (Patterson et al, 1990; Martin et al, 1992; Fry, 1986) have suggested that with age comes a decline in the use of active coping mechanisms and an increase in emotion-focused coping in response to stressful situations. Others, such as Pearlin and Schooler (1978) and McCrae (1989), have not replicated these findings. What does appear to be the case, and what was certainly true in this study, is that the nature of the stressful situations demanding attention change as people age and these necessarily elicit different types of coping

responses (Osipow et al, 1985; Moos and Schaefer, 1993). In the present study, significant differences were noted in the types of stressful situations identified, with those on active duty more frequently identifying a job-related stress situation and those retired from the military more frequently reporting on a health-related incident. Despite this, and with the exception of cognitive coping, examination of means revealed no significant differences in use of the identified coping mechanisms between those on active duty and those retired from the military. It should be pointed out that the comparatively young age and favorable employment circumstances of sample participants who were retired from the military may account for the relative absence of significant intergroup differences in coping.

6. One of the more striking findings of this study was the important relationship between context of retirement variables and the use of all identified coping mechanisms. A longer period of planning and retiring later than planned were associated with increased use of active coping responses, while retiring earlier than planned was associated with increased use of wishful thinking and a decreased tendency to seek social support or to use cognitive coping. Seeking social support was also positively related to a longer period of planning and retiring earlier than peers. Additionally, involuntary retirement was correlated with decreased use of growth-oriented coping mechanisms. Finally, retiring earlier

than planned and earlier than peers were both related to reduced use of cognitive coping. As noted in other studies assessing the impact of retirement on individual functioning (George et al, 1984; Lazarus and DeLongis, 1983), individual responses to retirement from the military can only be understood with an awareness of the conditions under which it occurs. It would appear that the more positive the context of retirement, the broader the range of coping responses available for managing the demands of stressful situations.

7. Review of both the stepwise and hierarchical multiple regressions reflects considerable divergence between those on active duty and those retired from the military in terms of the fit of the model. While there does not appear to be a definitive explanation for this finding, a number of factors may have converged in defining this outcome. First, and perhaps foremost, respondents were restricted in the range of stressful situations from which they could choose (threat versus loss or challenge). While the intent was to eliminate a potential confounding factor, it also restricted the range of coping mechanisms likely to be used in managing the identified stressor. Results of other studies would suggest that threat situations are more likely to elicit emotion-focused coping mechanisms such as wishful thinking, fatalism or minimization (Wright and Sweeney, 1989; McCrae, 1984). While this might account for regression results involving those on active duty, it does not adequately explain the

improved fit of the model for those retired from the military. For this, it may be important to again consider identified differences in the context of the stressful situation (eg., job, home, financial, health, etc.), the relatively favorable mix of resources noted for those who were retired and the findings of other researchers that the tendency both to seek social support and to use active coping strategies is associated with more personal and contextual resources (Holahan and Moos, 1987, p. 951; Hobfall and Vaux, 1993). Finally, it has been suggested that, as workers age, they use more of all coping mechanisms in managing stressful situations (Osipow et al, 1985). Certainly, the findings of this study suggest increased versatility rather than restriction on the part of those retired from the military in meeting environmental demands.

8. Finally, there does appear to be some support for the perception that certain individuals may be more vulnerable in confronting stressful situations than others (House and Robbins, 1983, p. 176; Magnussen, 1982, p. 234-235; Pearlin et al, 1981, p. 339). In reviewing the hierarchical multiple regression tables, it is clear that the inclusion of interaction terms had its greatest impact in terms of those retired from the military. Substantial increases in the explanatory power of the model can be seen in use of both wishful thinking and cognitive coping. This would suggest that, all other things being equal, alcoholism and context of

retirement factors can serve to aggravate the process of coping with stress for those retired from the military. Those with the fewest resources are likely to be the most sensitive to changes within their environment and are likely to be slower to rebound as resource levels increase.

### Limitations

There are a number of limitations which must be born in mind in evaluating the findings of this study. First, and perhaps most importantly, findings are based on cross-sectional data and represent only one brief glimpse at a process which may have evolved over a period of days or weeks. While design decisions were necessarily influenced by considerations of practicality and cost, some level of distortion may have been the inevitable result. As was noted earlier, the conceptual framework underlying this study focuses on the transactional nature of the stress and coping process. The individual is not only affected by his environment, but acts on it as well. Coping is then characterized by a series of assessments, actions and reassessments. Cross-sectional data is likely to obscure the richness of this process and capture individuals at transitional points in their management of stressful situations.

Additionally, a number of researchers have begun to

examine the mechanisms employed in the measurement of coping (Stone et al, 1991; Ben-Porath et al, 1991). Three areas of concern have been cited. First, not all items included in the Ways of Coping Checklist are applicable to all problems. Consequently, differences in use of various coping mechanisms may reflect limitations of the instrument, rather than substantive differences in the demand characteristics of various situations. Ben-Porath et al (1991) suggest that failure to correct for inapplicable items could bias findings concerning situational effects on coping. Concern has also been expressed with regard to the failure of most studies of coping to define the period for which subjects report coping. Stone et al (1991) point out that, depending on the individual, the focus may be the immediate event or include cognitive and behavioral steps leading up to and following the event. The longer the coping period, the more diverse the demands placed on the individual and the greater the number of coping responses likely to be employed. A third issue encouraging caution in evaluation of findings centers on the fact that the measurement of coping was done retrospectively and results may well be influenced by individual bias and problems with recall.

It should also be emphasized that, for those subjects who were alcoholic, the timing of data collection in relation to treatment may have significant implications limiting the ability to generalize from the results of this study. Surveys

were mailed for completion by subjects one month after their discharge from inpatient rehabilitation. It would be logical to assume that responses to survey questions would be different for those with shorter or longer periods of sobriety. The length of success in managing recovery would be an important factor defining not only the personal and interpersonal resources available for coping with stress, but the tendency to rely more heavily on some coping mechanisms than on others.

Finally, the characteristics of the sample itself limits the ability to generalize from this study. The initial sampling plan assumed the existence of a larger pool of alcoholics retired from the military than was actually found to be available. Consequently, a larger number of those on active duty were included in order to secure an adequate number of cases for the study. A larger sample of those retired from the military would have insured a stronger base for interpretation. Also, the nature of the study and the population examined necessitated a non-random sample based on self-selection. It is logical to assume that those who opted to participate and took the time to complete a lengthy survey instrument were somehow different from those who chose not to do so. It is also likely that the military population surveyed in this study is fundamentally different from the general population of which it is a part. Despite these limitations, similarities in these findings and those of

previous studies lend credence and suggest the value of continued exploration.

### Recommendations

The findings and limitations noted above serve to emphasize the importance of continued research in the area of alcoholism and coping. The concept of vulnerability has important implications for both practice and program design. For some time, researchers have been stressing the value of treatment matching, identifying unique needs among sub-groups within the treatment population and adjusting or developing programs to satisfy those special requirements (eg., Sanchez-Craig and Walker, 1982; Kadden et al, 1992; Litt et al, 1992). Emphasis on treatment matching evolved as practitioners and researchers came to realize that alcoholics comprise a very heterogeneous population. As one part of this broader effort to identify individual differences and their implications for treatment, increased emphasis has been placed on variation in coping skills as a contributor in defining relapse potential.

While there appears to be strong support for the value of expanded coping skills within this treatment population (eg., Moos et al, 1990; Cooper, 1983; Cronkite and Moos, 1980), programs designed to address this need have met with mixed results (Sanchez-Craig and Walker, 1982; Intagliata, 1978) and it has been noted that the impact of coping skills

training decreases over time (Monti et al, 1989, p. 171). One important criticism of these efforts addresses the single-minded focus on the process of managing stress, rather than a balanced approach which also recognizes the value of strengthening resources, both to prevent stress and to minimize the impact of stress when it does occur (Moos et al, 1990, p. 237-238; Matheny et al, 1986, p. 537).

The findings of this study support this perspective and focus attention on the existence of sub-groups of alcoholics who may respond more slowly to treatment efforts designed to enhance coping skills and who may react more strongly to changes in environmental demands. For these individuals, relapse prevention may require that skills training be closely tied to efforts to expand the personal and interpersonal resources necessary for confronting stressful situations. Lazarus advocates the use of ipsative research designs involving repeated studies of the same individuals over time as an essential ingredient in identifying both the stable and situationally defined components of coping with stressful situations (Lazarus and Cohen, 1987; Lazarus, 1993). Such research methods focused on the issue of alcoholism and coping could provide invaluable information to assist both in the identification of vulnerable populations and in assessing the relative impact on treatment outcome of different program mixes stressing skill development, resource enhancement or both.

**APPENDIX I**

**INFORMATION LETTER AND  
VOLUNTARY CONSENT FORM**

(Subjects Completing Inpatient Treatment)

USAF SURVEY CONTROL # 88-69  
EXPIRATION DATE: 1 JUNE 89

Dear Sir,

I am an Air Force Institute of Technology (AFIT) student completing my PhD in Social Work at Rutgers, the State University of New Jersey. As part of this program, I am conducting research to learn more about the way Air Force personnel respond to stresses they encounter in their lives. I am particularly interested in changes which may be related to alcohol use. The results of this study will increase understanding of conditions which influence the way we cope and will help in developing programs to assist people in dealing with daily pressures following inpatient treatment. Approval for administration of the survey has been granted by both AFIT and the Personnel Survey Branch, HQ AFMPC (USAF Survey Control #88-69; expiration date - 1 June 1989).

While as many people as possible are encouraged to participate in this study, please be aware that your involvement is entirely voluntary. You may refuse to participate if you wish and you may also decline to answer particular questions if you wish. Although participation is voluntary, I would like to urge you to help in this study. Your involvement will be important to the successful completion of this research and will add strength to recommendations based on the findings of this study.

If you agree to participate, please complete and sign both copies of the attached Voluntary Consent Form. You should keep this cover letter and one copy of the Voluntary Consent Form for your records. The second copy will be collected by treatment staff and forwarded to me. In approximately four weeks, you will receive a questionnaire which should take about half an hour to complete. Answers to questions in the survey will remain completely anonymous. No effort will be made to identify individual responses and no identifying information will be requested on the survey itself.

The information requested on the Voluntary Consent Form will only be used to compile a mailing list of volunteers. All identifying information will remain strictly confidential and will be accessible only to this researcher. On completion of the survey, all voluntary Consent Forms will be destroyed.

If you have questions concerning this survey, please feel free to discuss them with your treatment staff or contact me directly at the address below. Thank you for your cooperation.

Sincerely,

Peter F. Durand, Maj, USAF, BSC

**VOLUNTARY CONSENT TO PARTICIPATE**

Research Title: Coping with Stress Survey

USAF Survey Control Number: 88-69

Expiration Date: 1 June 1989

Researcher: Peter F. Durand, Maj, USAF, BSC

I agree to participate in this research study of conditions which influence the way people deal with stress. It is understood that the information provided below will be held in strict confidence and will only be used by the person identified above. It is also understood that on completion of the survey, any identifying information will be destroyed. Responses to the survey will remain anonymous and published results will include no information which would identify individual participants. My participation in this research is voluntary and I am aware that I may refuse to participate or withdraw from this study at any time without penalty. I have been advised that, in the event I have questions concerning this research, I may contact the person identified above. I have retained a copy of this consent form and the cover letter outlining the nature and extent of my participation in this study.

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Name - please print)

\_\_\_\_\_  
(Rank)

\_\_\_\_\_  
(Duty Status: Retired/Active Duty)

\_\_\_\_\_  
(Street Address/Apartment Number or Post Office Box)

\_\_\_\_\_  
(City, State, and Zip Code)

**APPENDIX II**

**SURVEY COVER LETTER**

(Subjects Completing Inpatient Treatment)

USAF SURVEY CONTROL # 88-69  
EXPIRATION DATE: 1 JUNE 89

Dear Sir,

Approximately four weeks ago you volunteered to participate in an Air Force approved research study (USAF Survey Control # 88-69; expiration date - 1 June 1989) examining factors that influence the way people respond to stress they encounter in their day-to-day lives. I appreciate your interest and willingness to cooperate.

As I indicated, answers to questions in this survey are to remain completely anonymous. No effort will be made to identify individual responses. In line with this, I would ask that you **DO NOT WRITE YOUR NAME** or other identifying information on the survey form.

This survey has seven parts. The entire survey should take about half an hour to complete. Once you have completed the questionnaire, please go through it to make sure you haven't missed any questions. Then, fold it in thirds and mail it in the self-addressed envelope provided. Lastly, mail the return post card **SEPARATELY** when you mail your completed questionnaire. When it is received, your name will be removed from the mailing list.

If you have any questions concerning this survey, please feel free to contact me at the address below.

Thank you again for your cooperation.

Peter F. Durand, Maj, USAF, BSC  
(Address)

**APPENDIX III**

**SURVEY COVER LETTER**

(Non-Treatment Subjects)

USAF SURVEY CONTROL # 88-69  
EXPIRATION DATE: 1 JUNE 89

Dear Sir,

I am an Air Force Institute of Technology (AFIT) student completing my PhD in Social Work at Rutgers, the State University of New Jersey. As part of this program, I am conducting research to learn more about the way Air Force Personnel respond to stresses they encounter in their lives. I am particularly interested in changes that may occur as people move through their military careers and into retirement. The results of this survey will increase understanding of conditions which influence the way we cope and will help in developing programs to assist people in dealing with daily pressures and frustrations. Approval for conducting this survey has been granted by both AFIT and the Air Force Military Personnel Center, Personnel Survey Branch (USAF Survey Control # 88-69; expiration date: 1 June 1989).

While as many people as possible are encouraged to complete and return this survey, please be aware that your involvement is entirely voluntary. You may refuse to participate if you wish and you may also decline to answer particular questions if you wish. Although participation is voluntary, I would like to urge you to respond to the questionnaire. Your response will be important to the successful completion of this research and will add strength to recommendations based on the findings of this study.

Answers to questions in this survey are to remain completely anonymous. No effort will be made to identify individual responses. In line with this, I would ask that you **DO NOT WRITE YOUR NAME** or other identifying information on the survey form.

This survey has seven parts. The entire survey should take about half an hour to complete. Once you have completed the questionnaire, please go through it to make sure you haven't missed any questions. Then, fold it in thirds and mail it in the self addressed envelope provided. Lastly, mail the return post card **SEPARATELY** when you send your completed questionnaire. When it is received, your name will be removed from the mailing list.

If you have any questions concerning this survey, please feel free to contact me at the address below. Thank you for your cooperation.

Sincerely,

Peter F. Durand, Maj, USAF, BSC  
(Address)

**APPENDIX IV**

**POSTCARD REMINDER**

Recently, a questionnaire was mailed to you requesting information about the way in which you cope with stress. If you have already completed it and returned it to me, please accept my sincere thanks. If not, please do so as soon as possible. Your experiences and the coping strategies you used will provide valuable information in understanding factors that influence coping efforts.

Again, thank you for your cooperation in this important research

Sincerely,

Peter F. Durand, Maj, USAF, BSC

**APPENDIX V**

**SECOND MAILING  
SURVEY COVER LETTER**

(Subjects Completing Inpatient Treatment)

USAF SURVEY CONTROL # 88-69  
EXPIRATION DATE: 1 JUNE 89

Dear Sir,

Some time ago, you volunteered to participate in an Air Force-approved research study examining factors that influence the way people respond to stress they encounter in their day-to-day lives. Unfortunately, I have not as yet received your completed survey. If you have already forwarded it to me, please accept my sincere thanks. If not, I would very much appreciate your doing so as soon as possible.

I realize that there are many demands at this time of year, and things which don't require immediate attention may be set aside and inadvertantly forgotten. However, your participation in this research is extremely important. Without full participation, it will not be possible to accurately identify those factors that are important in determining responses to stress.

In case you have misplaced the original packet, I am enclosing a new survey form and return envelope. As I mentioned in my original letter, answers to questions in the survey remain **COMPLETELY ANONYMOUS**. No effort will be made to identify individual responses. To insure anonymity, I would ask that you **DO NOT WRITE** your name or other identifying information on the survey form. While the survey has seven parts, it requires no more than 30 minutes to complete. Once you have completed the questionnaire, please go through it to make sure you haven't missed any questions. Then, fold it and mail it in the envelope provided. Finally, mail the return postcard **SEPARATELY** when you mail your completed survey. When it is received, your name will be removed from the mailing list.

If there are questions, please feel free to contact me at the address below.

Again, thank you for your time and cooperation.

Sincerely,

Peter F. Durand, Maj, USAF, BSC  
(Address)

**APPENDIX VI**

**SECOND MAILING  
SURVEY COVER LETTER**

(Non-Treatment Subjects)

USAF SURVEY CONTROL # 88-69  
EXPIRATION DATE: 1 JUNE 89

Dear Sir,

Some time ago, I forwarded to you an Air Force-approved survey examining factors that influence the way people respond to stress they encounter in their day-to-day lives. Unfortunately, I have not received your completed questionnaire. If you have already forwarded it, please accept my sincere thanks. If not, I would very much appreciate your doing so as soon as possible.

I realize that there are likely to be many demands on your time, and that things which don't require immediate attention may be set aside and inadvertently forgotten. Though your participation is strictly voluntary, it is essential to the successful completion of this research. Without full participation, it will not be possible to accurately identify those factors that are important in determining responses to stress.

In case you have misplaced the original packet, I am enclosing a new survey form and return envelope. As I mentioned in my original letter, answers to questions in the survey remain **COMPLETELY ANONYMOUS**. No effort will be made to identify individual responses. To insure anonymity, I would ask that you **DO NOT WRITE** your name or other identifying information on the survey form. While the survey has seven parts, it should take no more than 30 minutes to complete. Once you have finished the questionnaire, please go through it to make sure you haven't missed any questions. Then fold it and mail it in the return envelope provided. Finally, mail the return postcard **SEPARATELY** when you mail your completed questionnaire. When it is received, your name will be removed from the mailing list.

If there are any questions, please feel free to contact me at the address below.

Again, thank you for your time and cooperation.

Sincerely,

Peter F. Durand, Maj, USAF, BSC  
(Address)

**APPENDIX VII**

**SURVEY RETURN POST CARD**

Once you have completed the accompanying questionnaire, please mail this post card **SEPARATELY**. This will guarantee your anonymity as a respondent, while allowing removal of your name from the list of study participants. Thank you for your cooperation in this most important project.

---

(Printed Name)

**APPENDIX VIII**

**SURVEY FORM**

USAF SURVEY CONTROL # 88-69  
EXPIRATION DATE: 1 JUNE 89

### **COPING WITH STRESS SURVEY**

This survey is being conducted with the approval of the Air Force Institute of Technology (AFIT) and the Personnel Survey Branch, HQ AFMPC. Answers to questions in this survey will remain anonymous and no effort will be made to identify individual responses. **PLEASE DO NOT WRITE YOUR NAME OR OTHER IDENTIFYING INFORMATION ON THE SURVEY FORM.** The items in this questionnaire are concerned with your own perceptions and experiences. As such, there are no right or wrong answers. Please read the directions at the beginning of each section carefully. Be as open as possible and respond to all items as completely as you can. Once you have completed the questionnaire, please fold it in thirds and mail it in the self-addressed envelope provided.

**THANK YOU FOR YOUR COOPERATION!**

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I. Health can often affect how people respond to stress. Please check the appropriate responses concerning your health.

a. How would you rate your overall health at the present time?

- 1. ☐ poor
- 2. ☐ fair
- 3. ☐ good
- 4. ☐ excellent

b. Is your health now better, about the same, or not as good as it was three years ago?

- 1. ☐ not as good
- 2. ☐ same
- 3. ☐ better

c. Do your health problems stand in the way of your doing the things you want to do?

- 1. ☐ a great deal
- 2. ☐ a little
- 3. ☐ not at all

d. Would you say that your health is better, about the same, or not as good as most people your age?

- 1. ☐ not as good
- 2. ☐ same
- 3. ☐ better

II. How strongly do you agree or disagree with these statements about yourself? (Check the blank which most closely reflects how you feel about each statement.)

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
a. I feel that I'm a person of worth, at least on an equal plane with others.	_____	_____	_____	_____
b. I feel that I have a number of good qualities.	_____	_____	_____	_____
c. All in all, I'm inclined to feel that I am a failure.	_____	_____	_____	_____
d. I am able to do things as well as most other people.	_____	_____	_____	_____
e. I feel I do not have much to be proud of.	_____	_____	_____	_____
f. I take a positive attitude toward myself.	_____	_____	_____	_____
g. On the whole, I am satisfied with myself.	_____	_____	_____	_____
h. I wish I could have more respect for myself.	_____	_____	_____	_____
i. I certainly feel useless at times.	_____	_____	_____	_____
j. At times I think I'm no good at all.	_____	_____	_____	_____
k. There is really no way I can solve some of the problems I have.	_____	_____	_____	_____
l. Sometimes I feel that I'm being pushed around in life.	_____	_____	_____	_____

	STRONGLY AGREE	AGREE	DISAGREE	STRONGLY DISAGREE
m. I have little control over things that happen to me.	_____	_____	_____	_____
n. I can do just about anything I really set my mind to.	_____	_____	_____	_____
o. I often feel helpless in dealing with the problems of life.	_____	_____	_____	_____
p. What happens to me in the future mostly depends on me.	_____	_____	_____	_____
q. There is little I can do to change many of the important things in my life.	_____	_____	_____	_____

III. The following is a list of problems that people sometimes have. Please check the appropriate space indicating how often you have been bothered by each of these problems over the past 6 months.

1. Most or all of the time
2. Occasionally or a moderate amount of time
3. Some or a little of the time
4. Rarely
5. Never

	MOST OF TIME					NEVER	
	1	2	3	4	5		
1. Having problems managing money	—	—	—	—	—		
2. Not having a close companion	—	—	—	—	—		
3. Having too many responsibilities	—	—	—	—	—		
4. Not having people you can depend on	—	—	—	—	—		
5. Too many demands on your time	—	—	—	—	—		
6. Not having a satisfactory sex life	—	—	—	—	—		
7. Having problems communicating with others	—	—	—	—	—		
8. Not seeing enough of people you feel close to	—	—	—	—	—		
9. Deciding on how to spend money	—	—	—	—	—		
10. Not having enough responsibilities	—	—	—	—	—		
11. Not having someone who shows concern for your problems	—	—	—	—	—		
12. Having too little leisure time	—	—	—	—	—		
13. Not having enough money to do the things you want	—	—	—	—	—		
14. Problems with children	—	—	—	—	—		
15. Not having a satisfying job	—	—	—	—	—		

1. MOST or all of the time
2. OCCASIONALLY or a moderate amount of time
3. SOME or a little amount of the time
4. RARELY
5. NEVER

---

	MOST OF TIME					NEVER	
	1	2	3	4	5		
16. Feeling too controlled by others	—	—	—	—	—		
17. Not having enough money to get by on	—	—	—	—	—		
18. Dissatisfied with your marital status (single, married)	—	—	—	—	—		
19. Not having enough close friends	—	—	—	—	—		
20. Problems with spouse/ex-spouse	—	—	—	—	—		
21. Not having someone who shows you love and affection	—	—	—	—	—		
22. Feeling too dependent on others	—	—	—	—	—		
23. Other people interfere with things you want to do	—	—	—	—	—		
24. Problems with in-laws/relatives	—	—	—	—	—		
25. Not having someone who understands your problems	—	—	—	—	—		
26. Having too much time on your hands	—	—	—	—	—		
27. Conflicts with people who are close to you	—	—	—	—	—		
28. Not being able to get some- where because of lack of transportation	—	—	—	—	—		

IV. The following questions concern alcohol use. Please check the appropriate responses concerning your use of alcohol.

	<u>YES</u>	<u>NO</u>
1. Do you currently consume alcohol in any form (eg., beer, wine, liquor)	___	___
2. Do you feel you are a normal drinker? (By normal drinker we mean you drink less than or as much as most other people)	___	___
3. Have you ever awakened the morning after some drinking the night before and found that you could not remember a part of the evening?	___	___
4. Does your wife, husband, a parent or other near relative ever worry or complain about your drinking?	___	___
5. Can you stop drinking without a struggle after one or two drinks?	___	___
6. Do you ever feel guilty about your drinking?	___	___
7. Do friends or relatives think you are a normal drinker?	___	___
8. Are you able to stop drinking when you want to?	___	___
9. Have you ever attended a meeting of Alcoholics Anonymous?	___	___
10. Have you ever gotten into physical fights when drinking?	___	___
11. Has drinking ever created problems between you and your wife, husband, a parent or other near relative?	___	___
12. Has your wife, husband, a parent or other near relative ever gone to anyone for help about your drinking?	___	___
13. Have you ever lost friends or girl friends because of your drinking?	___	___
14. Have you ever gotten into trouble at work or school because of your drinking?	___	___

	YES	NO
15. Have you ever lost a job because of your drinking?	___	___
16. Have you ever neglected your obligations, your family, or your work for two or more days in a row because you were drinking?	___	___
17. Do you drink before noon fairly often?	___	___
18. Have you ever been told you have liver trouble? Cirrhosis?	___	___
19. After heavy drinking have you ever had delerium tremens (DTs) or severe shaking, or heard voices or seen things that weren't really there?	___	___
20. Have you ever gone to anyone for help about your drinking?	___	___
21. Have you ever been in a hospital because of your drinking?	___	___
22. Have you ever been a patient in a psychiatric hospital or on a psychiatric ward of a general hospital where drinking was part of the problem that resulted in hospitalization?	___	___
23. Have you ever been at a psychiatric or mental health clinic or gone to any doctor, social worker or clergyman for help with any emotional problem where drinking was part of the problem?	___	___
24. Have you ever been arrested for drunken driving, driving while intoxicated or driving under the influence of alcoholic beverages? (IF YES, how many times? ___)	___	___
25. Have you ever been arrested, even for a few hours, because of other drunken behavior? (IF YES, how many times? ___)	___	___

V. People use a broad range of responses in dealing with the situations that trouble them in their day-to-day lives.

Take a few moments and think about an event or situation that occurred during the last six months in which you faced some kind of a threat or danger, or in which you were worried about how things would turn out.

Using the space below, please describe in no more than one or two sentences what happened, where it took place, and who was involved (such as a friend, boss or relative). The situation could be one that is going on right now, or it could be one that has already happened. It need not be a major event. It could be a common situation such as having a sick child, a car breaking down, having an argument with your spouse, friend or child, or trouble with someone at work. It may involve taking on new responsibilities or having to make a change in your life. Again, whatever the situation, it should be one that at some level represented a threat or danger to you. Please **DO NOT** worry about making it into an essay - just put down the things that come to you.

What happened:

---



---



---

Where did it happen (eg., work, home, etc.):

---

How long ago did it happen: \_\_\_\_\_

Who was involved (eg., girlfriend, boss, co-worker, etc. - please, no names):

---



---

In what category would you place this stressful experience? (Circle one)

Job/Career	Financial	Social/Community
Family/Home	Health/Medical	Spiritual
Other (please specify _____)		

On a scale from 1 to 5, where 1 is not stressful and 5 is very stressful, how stressful would you say this situation or event was? (Circle the appropriate number)

1	2	3	4	5
Not Stressful				Very Stressful

Which of the following statements best fits the situation you just described? (Check only one response)

In general, this situation was one:

1. ☐ that I could change or do something about.
2. ☐ that I had to accept or get use to.
3. ☐ that I needed to know more about before I could act.
4. ☐ in which I had to hold myself back from doing what I wanted to do.

---

Below are listed a number of responses which people use in dealing with stress. Please read each item and indicate, by checking the appropriate category, how useful it was in dealing with the stressful situation you just described.

	Not Used	Used Some- what	Used Quite a bit	Used a Great Deal
	0	1	2	3
1. Just concentrated on what I had to do next - the next step.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Bargained or compromised to get something positive from the situation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Talked to someone to find out more about the situation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Criticized or lectured myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Tried not to burn my bridges but leave things open somewhat.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Hoped a miracle would happen.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Went on as if nothing had happened.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. I tried to keep my feelings to myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

		Not Used 0	Used Some- what 1	Used Quite a Bit 2	Used a Great Deal 3
9.	Looked for the silver lining, so to speak; tried to look on the bright side of things.	_____	_____	_____	_____
10.	Slept more than usual.	_____	_____	_____	_____
11.	I expressed anger to the person(s) who caused the problem.	_____	_____	_____	_____
12.	Accepted sympathy and understanding from someone.	_____	_____	_____	_____
13.	Tried to forget the whole thing.	_____	_____	_____	_____
14.	I got professional help.	_____	_____	_____	_____
15.	Changed or grew as a person in a good way.	_____	_____	_____	_____
16.	I made a plan of action and followed it.	_____	_____	_____	_____
17.	I accepted the next best thing to what I wanted.	_____	_____	_____	_____
18.	Realized I brought the problem on myself.	_____	_____	_____	_____
19.	I came out of the experience better than when I went in.	_____	_____	_____	_____
20.	Talked to someone who could do something concrete about the problem.	_____	_____	_____	_____
21.	Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.	_____	_____	_____	_____

	Not Used 0	Used Some- what 1	Used Quite a Bit 2	Used a Great Deal 3
22. I tried not to act too hastily or follow my first hunch.	_____	_____	_____	_____
23. Changed something so things would turn out alright.	_____	_____	_____	_____
24. Avoided being with people in general.	_____	_____	_____	_____
25. I asked a relative or friend I respected for advise.	_____	_____	_____	_____
26. Kept others from knowing how bad things were.	_____	_____	_____	_____
27. Talked to someone about how I was feeling.	_____	_____	_____	_____
28. Stood my ground and fought for what I wanted.	_____	_____	_____	_____
29. I knew what had to be done, so I doubled my efforts to make things work.	_____	_____	_____	_____
30. Refused to believe that it had happened.	_____	_____	_____	_____
31. Came up with a couple of different solutions to the problem.	_____	_____	_____	_____
32. Felt bad that I couldn't avoid the problem.	_____	_____	_____	_____
33. I tried to keep my feelings from interfering with other things too much.	_____	_____	_____	_____
34. Wished that I could change what had happened and how I felt.	_____	_____	_____	_____

	Not Used 0	Used Some- what 1	Used Quite a Bit 2	Used a Great Deal 3
35. Wished I could change the way I felt.	_____	_____	_____	_____
36. I changed something about myself.	_____	_____	_____	_____
37. I daydreamed or imagined a better time or place than the one I was in.	_____	_____	_____	_____
38. Wished that the situation would go away or somehow be over with.	_____	_____	_____	_____
39. Had fantasies or wishes about how things might turn out.	_____	_____	_____	_____
40. Wished I was a stronger person - more optimistic and forceful.	_____	_____	_____	_____
41. Thought about fantastic or unreal things (like perfect revenge or finding a million dollars) that made me feel better.	_____	_____	_____	_____
42. Blamed myself.	_____	_____	_____	_____

VI. So we can see how your responses compare with those of other people, we'd like a few facts about you.

a. Please check current rank or rank at retirement from the military:

- |                                 |                                  |                                  |
|---------------------------------|----------------------------------|----------------------------------|
| 1. <input type="checkbox"/> E-1 | 10. <input type="checkbox"/> W-1 | 14. <input type="checkbox"/> O-1 |
| 2. <input type="checkbox"/> E-2 | 11. <input type="checkbox"/> W-2 | 15. <input type="checkbox"/> O-2 |
| 3. <input type="checkbox"/> E-3 | 12. <input type="checkbox"/> W-3 | 16. <input type="checkbox"/> O-3 |
| 4. <input type="checkbox"/> E-4 | 13. <input type="checkbox"/> W-4 | 17. <input type="checkbox"/> O-4 |
| 5. <input type="checkbox"/> E-5 |                                  | 18. <input type="checkbox"/> O-5 |
| 6. <input type="checkbox"/> E-6 |                                  | 19. <input type="checkbox"/> O-6 |
| 7. <input type="checkbox"/> E-7 |                                  | 20. <input type="checkbox"/> O-7 |
| 8. <input type="checkbox"/> E-8 |                                  | 21. <input type="checkbox"/> O-8 |
| 9. <input type="checkbox"/> E-9 |                                  | 22. <input type="checkbox"/> O-9 |

b. Branch of service:

- |   |  |
|---|--|
| 1. <input type="checkbox"/> Air Force   | 6. <input type="checkbox"/> Other (Please specify _____) |
| 2. <input type="checkbox"/> Army        |  |
| 3. <input type="checkbox"/> Navy        |  |
| 4. <input type="checkbox"/> Marines     |  |
| 5. <input type="checkbox"/> Coast Guard |  |

c. What is (was) your total number of years of active duty?

\_\_\_\_\_ years

d. Check the highest grade or year you finished and got credit for in regular school or college:

Grade School

1. ☐ 8 years or less

High School

2. ☐ Grade 9  
 3. ☐ Grade 10  
 4. ☐ Grade 11  
 5. ☐ Grade 12

College

6. ☐ 1st year  
 7. ☐ 2nd year  
 8. ☐ 3rd year  
 9. ☐ 4th year

Graduate School

10. ☐ 1 year  
 11. ☐ 2 years  
 12. ☐ 3 years  
 13. ☐ 4 years  
 14. ☐ more than four years

e. What is the highest degree you have received?

1. ☐ High school diploma or equivalency
2. ☐ Associate, two year, junior college degree
3. ☐ Bachelor's degree
4. ☐ Master's degree
5. ☐ Professional (MD, DDS, etc.)
6. ☐ Doctorate (PhD)
7. ☐ Other (Please specify \_\_\_\_\_)

f. Are you now married, widowed, divorced, separated, or have you never been married?

1. ☐ Now married
2. ☐ Widowed
3. ☐ Divorced
4. ☐ Separated
5. ☐ Never Married

g. How old were you on your last birthday?

\_\_\_\_\_ years old

h. What race do you consider yourself?

- |                                      |  |
|--------------------------------------|--|
| 1. <input type="checkbox"/> White    | 4. <input type="checkbox"/> Asian                        |
| 2. <input type="checkbox"/> Black    | 5. <input type="checkbox"/> Other (Please specify _____) |
| 3. <input type="checkbox"/> Hispanic |  |

i. With what religion do you identify?

- |  |  |
|--|--|
| 1. <input type="checkbox"/> None       | 4. <input type="checkbox"/> Jewish                       |
| 2. <input type="checkbox"/> Protestant | 5. <input type="checkbox"/> Other (Please specify _____) |
| 3. <input type="checkbox"/> Catholic   |  |

j. Please check the box below which best represents your total income for the last calendar year (include spouse income if married):

- |  |   |
|--|---|
| 1. <input type="checkbox"/> Under \$10,000       | 7. <input type="checkbox"/> \$35,000 to \$39,999  |
| 2. <input type="checkbox"/> \$10,000 to \$14,999 | 8. <input type="checkbox"/> \$40,000 to \$44,999  |
| 3. <input type="checkbox"/> \$15,000 to \$19,999 | 9. <input type="checkbox"/> \$45,000 to \$49,999  |
| 4. <input type="checkbox"/> \$20,000 to \$24,999 | 10. <input type="checkbox"/> \$50,000 to \$54,999 |
| 5. <input type="checkbox"/> \$25,000 to \$29,999 | 11. <input type="checkbox"/> \$55,000 to \$59,999 |
| 6. <input type="checkbox"/> \$30,000 to \$34,999 | 12. <input type="checkbox"/> \$60,000 and over    |

k. **INCLUDING YOURSELF**, how many people depend upon this income to meet any portion of their living expenses? (Please write the appropriate number in the space below)

\_\_\_\_\_ people

- l. During the past **FIVE YEARS**, how many times have you changed your residence? (Please count each move from on-base to off-base housing or from off-base to on-base housing as one move)
- |                                   |  |
|-----------------------------------|--|
| 1. <input type="checkbox"/> none  | 4. <input type="checkbox"/> three times          |
| 2. <input type="checkbox"/> once  | 5. <input type="checkbox"/> four times           |
| 3. <input type="checkbox"/> twice | 6. <input type="checkbox"/> more than four times |
- m. How long have you lived at your present address?
- |  |  |
|--|--|
| 1. <input type="checkbox"/> three months or less | 5. <input type="checkbox"/> one to two years   |
| 2. <input type="checkbox"/> four to six months   | 6. <input type="checkbox"/> two to three years |
| 3. <input type="checkbox"/> seven to nine months | 7. <input type="checkbox"/> over three years   |
- n. During the past five years how many times have you had a change of assignment or job? (Please write the appropriate number in the space below)
- times
- o. Are you currently serving on active duty or are you retired from the military?
- |   |
|---|
| 1. <input type="checkbox"/> Serving on active duty    |
| 2. <input type="checkbox"/> Retired from the military |

VII. Finally, **ONLY IF YOU HAVE RETIRED FROM THE MILITARY**, please answer the remaining questions:

- a. What was the month and year of your retirement from the military?

\_\_\_\_\_  
(month)

\_\_\_\_\_  
(year)

- b. Did you retire voluntarily or on a mandatory basis?  
(Check only one response)

1. \_\_\_\_ I could have remained on active duty, but chose to retire voluntarily.
2. \_\_\_\_ I could have continued on active duty, but felt I would probably be forced to retire before too long.
3. \_\_\_\_ I was a reservist and was released involuntarily from active duty.
4. \_\_\_\_ I retired on a mandatory basis because I was not selected for promotion.
5. \_\_\_\_ I reached the mandatory retirement age.
6. \_\_\_\_ I was not selected for reenlistment.
7. \_\_\_\_ I retired because of my health.
8. \_\_\_\_ Other (Please specify \_\_\_\_\_)

- c. If your decision was voluntary, why did you decide to retire? (Check all that apply)

1. \_\_\_\_ I did not retire voluntarily.
2. \_\_\_\_ I was dissatisfied with my job or working conditions in the military.
3. \_\_\_\_ I saw no opportunity for promotion or advancement in the service.
4. \_\_\_\_ Too much uncertainty concerning promotion, retention or benefits.
5. \_\_\_\_ I (or my wife/family) wished to avoid separation due to continued active duty.
6. \_\_\_\_ I (or my wife/family) had personal concerns or needs (eg., health, education, etc.) that could not be handled while in the service.
7. \_\_\_\_ There was a specific job in civilian life that I wanted to take on.
8. \_\_\_\_ I thought it would be better to make the transition to a civilian career earlier rather than later.
9. \_\_\_\_ Opportunities for me were generally greater in civilian life than in continued military service.
10. \_\_\_\_ My service income was inadequate for my needs.
11. \_\_\_\_ Other (Please specify \_\_\_\_\_)

\_\_\_\_\_  
\_\_\_\_\_ )

- d. Would you say that you retired from the military earlier, at about the same time, or later than others who entered the military at the same time as you?
1. ☐ Earlier
  2. ☐ Same time
  3. ☐ Later
- e. In looking back, would you say that your retirement occurred earlier, at about the same time or later than you had planned?
1. ☐ Earlier
  2. ☐ Same time
  3. ☐ Later
- f. Approximately how far in advance did you begin actively planning for your retirement?
1. ☐ Less than three months before retiring
  2. ☐ Four to six months before retiring
  3. ☐ Seven to nine months before retiring
  4. ☐ Ten months to one year before retiring
  5. ☐ One to two years before retiring
  6. ☐ Two to three years before retiring
  7. ☐ More than three years before retiring
- g. Please identify from among the following areas of planning, those in which you took active steps prior to your retirement from the military:
1. ☐ Savings
  2. ☐ Selection of geographic area for retirement
  3. ☐ Housing
  4. ☐ Education
  5. ☐ Employment
  6. ☐ Leisure activities
  7. ☐ Other (Please specify \_\_\_\_\_)
- h. Did you attend any briefings or classes prior to your retirement in which retirement or the benefits for which you would be eligible were discussed?
1. ☐ Yes
  2. ☐ No
- i. What is your current employment status?
- |   |  |
|---|--|
| 1. <input type="checkbox"/> Working full time | 5. <input type="checkbox"/> In school                    |
| 2. <input type="checkbox"/> Working part time | 6. <input type="checkbox"/> Disabled                     |
| 3. <input type="checkbox"/> Unemployed        | 7. <input type="checkbox"/> Other (Please specify _____) |
| 4. <input type="checkbox"/> Fully retired     |  |

**THANK YOU FOR COMPLETING THIS QUESTIONNAIRE**

**Please fold the questionnaire, place it in the addressed envelope, and return it to:**

**PETER F. DURAND, MAJ, USAF, BSC  
(ADDRESS)**

**Finally, please mail the return postcard SEPARATELY when you return your completed questionnaire so that your name can be removed from the mailing list of study participants.**

**APPENDIX IX****VARIABLES INCLUDED IN REGRESSION STATEMENTS**

**INDEPENDENT VARIABLES****Demographic/Retirement Variables**

Alabuse	<ETOHIC>	Retdecis	<FORCEOUT>
Race	<RACEBLAC> <RACEOTHR>	Retiming	<EARLYRET> <LATERET>
Higrade	<COLLEGE2> <COLLEGE4> <GRADSCH>	Retpeers	<EARLPEER> <LATEPEER>
Marital	<MARRIED> <DIVORCED>	Retclass	<NOCLASS>
Religion	<PROTEST> <CATHOLIC> <JEWOTHER>	Beforet	<BEFORET1> <BEFORET2>
Income	<MEDINC> <HIGHINC>	Employmt	<WORKING> <PARTTIME> <FULLRET>
Dependnt		Yrsofad	
		Yrsret	

**Resource Variables**

Health	Money
Esteem	Demands
Intimate	Family
Autonomy	

**Stress Context Variables**

When	Control	<NOCNTROL>
Category	Severity	<MEDSEV> <HIGHSEV>
		<CATJOB> <CATHOME> <CATMED> <CATFINAN>

**DEPENDENT VARIABLES****Ways of Coping Factors**

Wishful

Growth

Active

Social

Cognitiv

**APPENDIX X****ZERO-ORDER CORRELATIONS**

**ZERO-ORDER CORRELATIONS AND DESCRIPTIVE  
INFORMATION FOR INTERVAL LEVEL STUDY VARIABLES**

Variable	1	2	3	4	5	6	7
1. Health	1.00	.25	.29	.06	.17	.08	-.04
2. Esteem	.25	1.00	.69	.35	.36	.15	-.00
3. Mastery	.29	.69	1.00	.26	.36	.16	.11
4. Intimate	.06	.35	.26	1.00	.00	.00	.00
5. Autonomy	.17	.36	.36	.00	1.00	.00	.00
6. Money	.08	.15	.16	.00	.00	1.00	.00
7. Demands	-.04	-.00	.11	.00	.00	.00	1.00
8. Family	.10	.18	.22	.00	.00	.00	.00
9. When	-.05	-.20	-.14	-.13	-.13	-.01	.03
10. Years of Active Duty	-.12	.04	-.04	.16	.11	.21	.06
11. Age	-.19	.04	-.05	.13	.12	.20	.17
12. # of Dependents	.08	.14	.03	.23	.06	-.13	-.18
13. Years of Retirement	-.19	.04	-.07	.18	.04	-.11	.30
14. Stability	.12	.01	.03	-.11	-.06	-.22	-.11
15. Wishful	-.18	-.45	-.37	-.38	-.32	-.20	-.06
16. Growth	.05	-.16	-.01	-.10	-.07	.01	.13
17. Active	.09	.19	.16	.05	.01	-.01	-.10
18. Social	-.07	-.02	-.09	.02	-.06	-.05	-.03
19. Cognitive	.07	.16	.14	.07	.02	.06	-.01
Mean	10.1	32.9	22.2	0	0	0	0
SD	1.8	4.6	3.3	1.0	1.0	1.0	1.0
N	478	470	470	474	474	474	474

**ZERO-ORDER CORRELATIONS AND DESCRIPTIVE  
INFORMATION FOR INTERVAL LEVEL STUDY VARIABLES**

Variable	8	9	10	11	12	13	14
1. Health	.10	-.05	-.12	-.19	.08	-.19	.12
2. Esteem	.18	-.20	.04	.04	.14	.04	.01
3. Mastery	.22	-.14	-.04	-.05	.03	-.07	.03
4. Intimate	.00	-.13	.16	.13	.23	.18	-.11
5. Autonomy	.00	-.13	.11	.12	.06	.04	-.06
6. Money	.00	-.02	.22	.20	-.13	-.11	-.22
7. Demands	.00	.03	.06	.17	-.18	.30	-.11
8. Family	1.00	-.10	-.22	-.15	-.35	.13	.12
9. When	-.10	1.00	-.00	-.03	.02	.05	.05
10. Years of Active Duty	-.22	-.00	1.00	.86	.21	.04	-.51
11. Age	-.15	-.03	.86	1.00	.05	.79	-.61
12. # of Dependents	-.35	.02	.21	.05	1.00	-.22	-.01
13. Years of Retirement	.13	.05	.04	.79	-.22	1.00	-.44
14. Stability	.12	.05	-.51	-.61	-.01	-.44	1.00
15. Wishful	-.11	.26	-.12	-.10	-.07	-.10	.03
16. Growth	-.02	.18	.03	-.01	-.08	.01	.03
17. Active	.05	-.06	-.06	-.06	-.00	-.10	.04
18. Social	-.08	.05	-.10	-.08	.08	.04	.10
19. Cognitive	.14	-.03	.18	.22	.04	.15	-.13
Mean	0	12.0	14.5	35.9	2.9	13.4	8.6
SD	1.0	8.8	7.2	11.8	1.5	7.3	4.2
N	474	477	478	476	475	103	477

**ZERO-ORDER CORRELATIONS AND DESCRIPTIVE  
INFORMATION FOR INTERVAL LEVEL STUDY VARIABLES**

Variable	15	16	17	18	19
1. Health	-.18	.05	.09	-.07	.07
2. Esteem	-.45	-.16	.19	-.02	.16
3. Mastery	-.37	-.01	.16	-.09	.14
4. Intimate	-.38	-.10	.05	.02	.07
5. Autonomy	-.32	-.07	.01	-.06	.02
6. Money	-.20	.01	-.01	-.05	.06
7. Demands	-.06	.13	-.10	-.03	-.01
8. Family	-.11	-.02	.05	-.08	.14
9. When	.26	.18	-.06	.05	-.03
10. Years of Active Duty	-.12	.03	-.06	-.10	.18
11. Age	-.10	-.01	-.06	-.08	.22
12. # of Dependents	-.07	-.08	-.00	.08	.04
13. Years of Retirement	-.10	.01	-.10	.04	.15
14. Stability	.03	.03	.04	.10	-.13
15. Wishful	1.00	.00	.00	.00	.00
16. Growth	.00	1.00	.00	.00	.00
17. Active	.00	.00	1.00	.00	.00
18. Social	.00	.00	.00	1.00	.00
19. Cognitive	.00	.00	.00	.00	1.00
Mean	0	0	0	0	0
SD	1.0	1.0	1.0	1.0	1.0
N	478	478	478	478	478

**APPENDIX XI**

**MODEL**

**MODEL**

Demographic Items	>	Retirement/ Alcoholism Items	>	Resource Items	>	Stress Context Items	>	Ways of Coping Factors
<hr/>		<hr/>		<hr/>		<hr/>		<hr/>
Race		Retdecis		Health		When		Wishful
Higrade		Retiming		Esteem		Category		Growth
Income		Retpeers		Intimate		Control		Active
Marital		Retclass		Autonomy		Severity		Social
Religion		Beforet		Money				Cognitiv
Yrsofad		Employment		Demands				
Dependent		Yrsret		Family				
		Alcoholism						

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